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HELMINTHOLOGICAL ABSTRACTS

incorporating

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For the Year 1946

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(HELMINTHOLOGY)

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Helminthological Abstracts
incorporating
Bibliography of Helminthology

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279—Acta Chirurgica Scandinavica.

a. CEDERBERG, O. E., 1946.—"Beiträge zur Kenntnis über das Vorkommen von Echinokokkus-Fällen in Finnland." 93 (2/5), 111–130. [English & French summaries pp. 126–130.]

(279a) Hitherto no real epidemic of Echinococcus infection has occurred in Scandinavia. Although Schwarz in 1928 had stated that only one case had been reported, actually 20 cases had been recorded at that date. The two new cases now described by Cederberg from the Lappland County Hospital in North Finland bring the total to 24. The reindeer is added to the Herbivora which can act as intermediate hosts. R.T.L.

280—Acta Pediatrica Española.

*a. TORRES MARTY, L., 1946.—"La ascaridiosis infantil y sus complicaciones." 4, 197–204.

281—Acta Pharmacologica et Toxicologica. Copenhagen.

a. DYBING, F. & DYBING, O., 1946.—"The toxic effect of tetrachlormethane and tetrachlorethylene in oily solution." 2 (3), 223–226.

(281a) Experiments on mice show that the toxic effect of tetrachlormethane [= carbon tetrachloride] and tetrachlorethylene is not increased when these anthelmintics are given with fatty oil. It is pointed out that it is usual to give castor oil with tetrachlorethylene to fur animals. The traditional text-book warning which originated with Quirll (1888) that fats must not be used in combination with anthelmintics owing to the danger of rapid absorption, especially of filix mas, thymol, carbon tetrachloride and tetrachlorethylene, is not supported by these experiments. R.T.L.

282—Actualidad Médica. Granada.

*a. NARCISO, A., 1946.—"O quiste hidático do pulmão em Portugal." 32, 1–18.

283—Administration Report of the Acting Director of Agriculture, Ceylon. Part IV.—Education, Science and Art (D).

a. SENEVIRATNE, J. L. DE S., 1946.—"Diseases and pests of tea." Year 1945, p. D4.

(283a) In his annual report for 1945, Seneviratne states that many reports were received of damage to dadaps [*Erythrina* sp.] by *Heterodera marioni*. This parasite has now become a limiting factor in the establishment and maintenance of this useful green manure tree, but for mature tea plants *Pratylenchus pratensis* is potentially more dangerous. R.T.L.

284—Afrique Française Chirurgicale.

a. CURTILLET, AUBANIAC & HOUEL, 1946.—"Observations d'hémorragie mortelle après intervention pour kyste hydatique du poumon." 4 (3), 235–241. [Discussion p. 241.]

b. COSTANTINI, H., BERNARD & GARÈS, 1946.—"La forme retro-angulo colique des kystes hydatiques du bord postéro-inférieur du foie." 4 (4), 302–306.

* Titles so marked throughout this number have not been seen in the original.

c. BOURGEON, R., 1946.—"Echinococcose secondaire de l'arrière cavité des épiploons." 4 (4), 309–312.
d. LIARAS, H., 1946.—"Echinococcose suppurée de la paroi abdominale." 4 (4), 335–337.
e. COSTANTINI, 1946.—"Discussion sur une observation de kyste hydatique du poumon, présentée par M. Goinard." 4 (4), 350–352.
*f. DÉVÉ, F., 1946.—"Peut-on admettre une éventuelle pénétration directe de l'embryon hexacanthe à l'origine de certains kystes hydatiques périphériques?" 4 (5), 361–364.
*g. CURTILLET, E. & HOUEL, J., 1946.—"Pour servir à l'étude de l'évolution des cavités des kystes hydatiques du poumon opérés et guéris." 4 (5), 399–402.

285—Agricultura e Pecuaria. Rio de Janeiro.

a. MACHADO, A. A., 1946.—"O 'anel vermelho' do coqueiro." 17 (281), 32–33.

286—Agricultural Journal. Department of Agriculture, Fiji.

a. GARNETT, K. J., 1946.—"Scours in calves." 17 (4), 102–104.

(286a) Calf diarrhoea in Fiji is thought by Garnett to be due to irritation set up by various nematodes of which *Haemonchus, Nematodirus* and *Cooperia* species are the commonest. R.T.L.

287—Agricultural Leaders' Digest.

*a. LOWE, C. D., 1946.—"A new drug for worming pigs." 27 (8), 24.

288—Algérie Médicale.

a. AUBRY, G., GOINARD, P., BOULARD, C. & CECCALDI, 1946.—"Kyste hydatique de la rate rompu dans l'abdomen." Year 1946, pp. 31–33, 35.
b. AUBRY, PORTIER & BOULARD, 1946.—"L'infantilisme hydatique. A propos de deux cas de kyste hydatique du poumon chez l'enfant." Year 1946, pp. 158–159, 161, 163–165, 167.
c. FRIESS, 1946.—"Distomatose hépatique à *Fasciola hépatica*. Infestation familiale." Year 1946, pp. 247–253. [Discussion p. 253.]

289—Amatus Lusitanus. Lisbon.

a. DUCLA SOARES, A., 1946.—"Cisticercose humana (comunicação de 4 casos clínicos)." 5 (8), 475–484.

290—American Journal of Clinical Pathology.

a. HELWIG, E. B. & BROWN, R. G., 1946.—"Clonorchiasis. Report of two cases." 16 (11), 714–720.
b. HUNTER, III, G. W., INGALLS, J. W. & COHEN, M. G., 1946.—"Comparison of methods for recovery of eggs of *Schistosoma japonicum* from feces." 16 (11), 721–724.

(290b) Using stools containing eggs of *Schistosoma japonicum*, the authors confirm that the original acid-ether method of Weller & Dammin for examining *S. mansoni* stools is superior to previous methods and was improved on by their subsequent acid–Triton-NE–ether method. J.J.C.B.

291—American Journal of Clinical Pathology. Technical Section.

a. BOERNER, F. & LUKENS, M., 1946.—"A quantitative fixation of complement test for the diagnosis of syphilis, leptospirosis, echinococcus disease, malaria, bacterial and other diseases." 10 (1), 4–12.
b. BRANDT, J. L. & FINCH, E. P., 1946.—"A simple flocculation slide test for the diagnosis of schistosomiasis." 10 (5), 141–152.

(291b) Brandt & Finch have devised a flocculation slide test for schistosomiasis similar to that of Suessenguth & Kline for trichinelliasis [see Helm. Abs., 13, No. 323a]. The antigen is prepared by adding an extract of powdered adult *Schistosoma mansoni* to a cholesterol solution, and is sensitized by the addition of lecithin. The actual test requires only a few minutes. In 110 negative controls, the test gave 101 negative, 7 doubtful and

only 2 false positive results. In known infected persons, the test was positive in 92% of 25 untreated children, in 87·5% of 32 untreated adults and in 75·6% of 90 treated adults. It was negative in ten syphilitics unexposed to schistosomiasis. In experimentally infected rabbits the titre began to rise at about the 11th day and was at its peak at the conclusion of the experiment on the 61st day. The test is recommended for the rapid survey of large groups of people. E.M.S.

292—American Journal of Diseases of Children.

a. SWARTZWELDER, J. C., 1946.—" Clinical ascariasis. An analysis of two hundred and two cases." 72 (2), 172–180.

293—American Journal of Obstetrics and Gynecology.

a. AABERG, M. E., 1946.—" Ancylostomiasis and hypoproteinemia complicated by pregnancy." 52 (5), 854–857.

294—American Journal of Psychiatry.

a. FRANK, J. D., 1946.—" Emotional reactions of American soldiers to an unfamiliar disease." 102 (5), 631–640.

295—American Journal of Roentgenology and Radium Therapy.

a. HEILBRUN, N. & KLEIN, A. J., 1946.—" Massive calcification of the liver : case report with a discussion of its etiology on the basis of alveolar hydatid disease." 55 (2), 189–192.

296—American Journal of Surgery.

a. CLARK, H. C., 1946.—" *Taenia saginata* in the appendix." 72 (1), 128–129.

297—Anais da Faculdade de Medicina da Universidade do Recife.

*a. MENEZES, H., 1946.—" Esquistosomiase mansoni." 10–11, 87–132.

298—Anais do Instituto de Medicina Tropical. Lisbon.

a. FRAGA DE AZEVEDO, J. & MEIRA, M. T. V. DE, 1946.—" Helmintas intestinais de macacos da Guiné Portuguesa. Tentativa de infestação experimental do homem e animais com o *Strongyloides simiae*." 3, 267–276. [English & French summaries pp. 274–275.]

b. MEIRA, M. T. V. DE & COITO, A. DE M. F., 1946.—" Parasitismo por vermes intestinais em habitantes de uma povoação rural portuguesa." 3, 277–291. [English & French summaries p. 290.]

(298a) From an examination of 67 monkeys (*Cercopithecus aethiops sabaeus, Erythrocebus patas* and *Papio papio*) in Portuguese Guinea, ten species of helminths were obtained of which two were flatworms and eight were roundworms. No results followed attempts to infect man, dogs and guinea-pigs with *Strongyloides simiae.* R.T.L.

(298b) A helminth survey of the Portuguese village of Quiaios, Figueira da Foz, showed that of 151 persons between 2 and 22 years of age, 131 had Ascaris and Trichuris, 10 had Ascaris, 5 had Trichuris, 3 had Ascaris, Trichuris and Enterobius, and 2 had Ascaris, Trichuris and *Hymenolepis nana.* The high degree of infestation is correlated with poor individual hygiene. R.T.L.

299—Anais Paulistas de Medicina e Cirurgia.

a. FORATTINI, O. P., 1946.—" Considerações clínicas sôbre um caso de localização apendicular do *Trichocephalus trichiurus* (Linnaeus 1771) Blanchard 1895." 52 (5), 327–331.

300—Anales Argentinos de Oftalmología.

*a. ETCHEMENDIGARAY, A. N., 1946.—" Trastornos de la acomodación por parasitosis intestinal." 7 (4), 125–128.

301—Anales de la Facultad de Medicina de Montevideo.

a. SUIFFET, W. R., 1946.—"Consideraciones de terapéutica sobre los quistes hidáticos del hígado abiertos en vías digestivas." 31 (5/8), 409–412.

302—Anales de Medicina. Barcelona.

*a. PRIM ROSELL, J. & GIMÉNEZ-SALINAS FILVA, A., 1946.—"Perforación del tubo digestivo por *Ascaris lumbricoides*." 33, 385–391.

303—Anales de la Sociedad Rural Argentina.

*a. PIRES, A., 1946.—"La fenotiazina como antiparasitario de los animales domésticos." 80, 682–688.

304—Anatomical Record.

†a. HUNTER, III, G. W., DIAMOND, L. S., INGALLS, Jr., J. W. & HODGES, E. P., 1946.—"Studies on schistosomiasis. II. Further studies on methods of recovering eggs of *S. japonicum* from stools." 96 (4), 515–516.

†b. VAN CLEAVE, H. J., 1946.—"Names for the immature stages of the Acanthocephala." 96 (4), 516.

†c. VAN CLEAVE, H. J., 1946.—"A review of the influences of bird migration upon the avian acanthocephalan fauna." 96 (4), 516.

†d. BOYD, E. M., 1946.—"A survey of the external parasites and the parasites of the digestive tract and its derivatives of the starling (*Sturnus vulgaris* L.) in North America." 96 (4), 517.

†e. MANTER, H. W., 1946.—"Host specificity of digenetic trematodes of marine fishes." 96 (4), 517–518.

†f. WALTON, A. C., 1946.—"Parasites of the Hylidae (Amphibia—Hylinae). III." 96 (4), 591.

†g. WALTON, A. C., 1946.—"Parasites of the Hylidae (Amphibia—Hylinae). IV." 96 (4), 592.

†h. WALTON, A. C., 1946.—"Parasites of the Hylidae (Amphibia—Hylinae). V." 96 (4), 592–593.

(304a) The AMS II method for the recovery of the eggs of *Schistosoma japonicum* from stools which, it is claimed, is superior to those now in use is as follows. Emulsify 1 gm. faeces in 10 c.c. glycerinated water, strain through two layers of gauze into a 15-c.c. conical centrifuge tube and centrifuge. Wash 4 times, then add 3 c.c. of $\frac{1}{2}$ HCl and $\frac{1}{2}$ Na_2SO_4+0·18 c.c. Triton NE (sp. gr. 1·08) and mix. Add an equal volume of cold ether, shake tube for 30 seconds and centrifuge at high speed for 2 minutes. Loosen ring at interphase, decant supernate and examine residue in bottom of tube. R.T.L.

(304b) The new terms "juvenile acanthocephalan" or "post-acanthella" are proposed for the final stage in the development of Acanthocephala in the arthropod intermediate host. R.T.L.

(304d) Examination of 300 North American starlings showed that 68% were infected with nematodes and 71% with cestodes. Marked pathological disturbances were attributed to Acanthocephala and occasionally to *Dispharynx nasuta*. R.T.L.

(304e) Approximately 80% of 216 species of teleost fishes examined at Dry Tortugas, Florida, were infected with one or more species of digenetic trematodes. The author concludes that "the greater the variety of species in an area, the greater is the development of specificity". R.T.L.

305—Animal Pathology Exchange. University of Illinois.

a. ANON., 1946.—"The treatment of parasites of domestic animals with phenothiazine." July, August, September, 2 pp.

† Abstract of paper presented at the 43rd Annual Meeting of the American Society of Zoologists, Boston, Mass., December 28, 29, 30, 1946.

306—Annales de Dermatologie et de Syphiligraphie.

a. MARGAROT, J., RIMBAUD, P., RAVOIRE, J. & PERRIE, J., 1946.—"Filariose loa-loa et manifestations cutanées." 8e Série, **6** (9), 465–466.

(306a) An eosinophilia of 62% in a negro with a persistent pruritus was found to be associated with numerous diurnal microfilariae in the blood which were identified as *Mf. loa*. Systematic examination of thirty native soldiers from the Cameroons revealed 11 similar cases. Onchocerciasis was not found. Calabar swellings were observed in only three cases. Treatment with anthiomaline, Congo red or intravenous alcohol was unsuccessful in most cases, but symptomatic treatment and desensitization gave relief. It is suggested that the condition is due to direct capillary irritation by the microfilariae combined with a generalized sensitization. E.M.S.

307—Annales de Médecine Vétérinaire.

a. WERY, J. E., 1946.—"La stephanurose. Une cause d'échec dans l'élevage du porc au Congo Belge." **90** (4), 117–125.

(307a) Infection with *Stephanurus dentatus* has caused economic losses reaching to 50% in pigs reared in the Leopoldville Province of Belgian Congo. R.T.L.

308—Annals of Internal Medicine.

a. RIFKIN, H. & EBERHARD, T. P., 1946.—"Pulmonary filariasis." 25 (2), 324–329.
b. FAUST, E. C., 1946.—"Schistosomiasis japonica: its clinical development and recognition." 25 (4), 585–600.

(308a) The clinical picture observed in a South Pacific native suggests the possibility of pulmonary filariasis. There were numerous microfilariae and eosinophiles in the sputum. The skin test with *Dirofilaria immitis* antigen was positive. It is thought that the oedema and eosinophilic infiltration of the bronchial lymphatics were responsible for the transitory pulmonary infiltrations noted in roentgenograms and due, it is suggested, to an acute allergic reaction. R.T.L.

(308b) Primary infections with *Schistosoma japonicum* in U.S. military patients from the Pacific Islands provided almost ideal conditions for clinical investigation. There were few clinical landmarks to suggest schistosomiasis in the prodromal and acute stages. Demonstration of the eggs of the parasite was the only method of specific diagnosis. The migration of the infective larvae in the body and the related pathogenesis are described. Striking photomicrographs demonstrate the infiltration of eggs into the tissues and show rays of mucoid material, which had been secreted by the miracidium, exuding through the egg shell. The lodgement of eggs in ectopic foci gives rise to neurological and cutaneous lesions. R.T.L.

309—Annals and Magazine of Natural History.

a. PRUDHOE, S., 1946.—"Two notes on trematodes." Year 1945, Ser. XI, 12 (90), 378–383.
b. COLLINGE, W. E., 1946.—"Note on the life-history of *Trichostrongylus tenuis* (Mehlis), Nematoda." Year 1945, Ser. XI, 12 (95), 783–784.
c. BAYLIS, H. A., 1946.—"A nematode parasite of tipulid larvae." Ser. XI, 13 (97), 53–59.

(309a) *Plagioporus protei* n.sp. from *Proteus anguinus*, and ?*Peracreadium* sp. from a polyclad of the genus *Planocera* are described. *P. protei* is distinguishable from *P. sinitsini* mainly by the arrangement of the vitelline follicles in the anterior region, and from *P. gnathopogonis* in the ratio of suckers and the size of the eggs. The Peracreadium occurred in serial sections of a turbellarian collected at Port Phillip Bay, Victoria, Australia. R.T.L.

(309b) From old petri-dish cultures of caecal contents of partridges infected with *Trichostrongylus tenuis*, Collinge obtained a large number of adults in the putrefying mass

which he identifies as undoubtedly *T. tenuis*. He claims that he has thus demonstrated that the whole of the life-history of this parasite has been completed without the intervention of a host. R.T.L.

(309c) Baylis gives an illustrated description of *Cephalobellus lloydi* n.sp., an oxyurid from the gut of tipulid larvae (" leather-jackets ") collected in Yorkshire and Berkshire. This is, apparently, the first record of the occurrence of a member of this genus in the gut of a dipteran host, all previous records having been from coleopteran hosts. T.G.

310—Antiseptic. Madras.

a. BAKSH, A., 1946.—" Filariasis in Bundelkhand." 43 (4), 225–228.
b. KUNDU, M. S., 1946.—" Ascariasis." 43 (4), 278–279.
*c. GHATAK, A., 1946.—" A case of malaria complicated with round worms." 43 (5), 356.

(310a) Filariasis is common in Bundelkhand and Baghelkhand in Central India, particularly in Panna State and those bordering. Baksh gives clinical details of a few cases. R.T.L.

(310b) As sulphonamide treatment of a suspected case of cholera resulted in the expulsion of ascaris worms by the mouth and rectum, Kundu is led to enquire if these drugs possess some anthelmintic property. R.T.L.

311—Archives of Internal Medicine.

a. MASON, P. K., DANIELS, W. B., PADDOCK, F. K. & GORDON, H. H., 1946.—" Latent phase of Asiatic schistosomiasis." 78 (6), 662–678.

(311a) Three hundred U.S. service personnel were admitted to hospital approximately six months after the onset of acute illness due to *Schistosoma japonicum* infection acquired at Leyte, Philippine Islands. The symptoms had appeared 3–9 weeks after exposure to infection. Haematological findings, the results of proctological examination, and the neurologic complications are recorded. Eggs disappeared during three months from the stools in 81% of the patients treated with 320 c.c. of 0·5% solution of tartar emetic, and from 18% of those treated with 65 c.c. of a 6·3% solution of fouadin. An addendum states that a course of 444 c.c. of 0·5% solution of tartar emetic is the most effective therapy. R.T.L.

312—Archives of Ophthalmology.

a. CLARK, W. B., 1946.—" Onchocerciasis in Guatemala : a preliminary report." [Summary of paper presented to the New York Academy of Medicine, Section of Ophthalmology, May 20, 1946.] 36 (5), 644–645. [Discussion p. 645.]

(312a) A complete ophthalmic examination of 1,215 onchocerciasis patients was carried out in Yepocapa, a village of 8,000 inhabitants. In 29 cases two or more microfilariae were seen in the aqueous fluid, though none of these complained of entoptic vision. Even where the anterior chamber was filled with microfilariae, there was no injection of the eye or ciliary injection. R.T.L.

313—Archives of Pathology.

a. STEINER, P. E., 1946.—" Necropsies on Okinawans. Anatomic and pathologic observations." 42 (4), 359–380.

(313a) Of 150 natives of Okinawa examined post mortem 44·7% had Ascaris and 34·7% had hookworms. Enterobius and an undiagnosed tapeworm occurred in one each, but microscopical examination of the faeces gave higher returns. Trichuris ova were found in 13 cases, Enterobius twice and Strongyloides twice in 72 examinations, but the incidence of Ascaris ova was less than the number of adult worms found due to the fact that in many cases only males or non-gravid females were present. Anatomical changes characteristic of filariasis were found in 13 persons, 12 of them men. R.T.L.

314—Archivio Italiano di Chirurgia.

a. CUCCIOLI, U., 1946.—"Considerazioni patogenetiche su alcuni casi di cisti di echinococco." **68** (1), 36–48.
b. PAOLUCCI DI V., R., 1946.—"Considerazioni diagnostiche e clinico-terapeutiche su due casi di cisti dermoide ed uno di cisti di echinococco gigante del mediastino." **68** (2,3), 200–207.

315—Archivio di Tisiologia. Istituto Sanatoriale "Principi di Piemonte", Napoli.

*a. IZZO, M., 1946.—"Cisti da echinococco del polmone trattato casualmente con pneumotorace." **1**, 336–339.

316—Archivio "de Vecchi" per l'Anatomia Patologica e la Medicina Clinica.

*a. GARBATO, B., 1946.—"Sul meccanismo di fissazione del bacillo tubercolare nei muscoli trichinizzati." **8**, 643–665.

317—Archivos Argentinos de Enfermedades del Aparato Digestivo y de la Nutrición.

*a. RAIFMAN, J., 1946.—"Huevos embrionarios de *Uncinaria americana*." **21**, 572–577.

318—Archivos de la Asociación para Evitar la Ceguera en México.

a. PUIG SOLANES, M., FONTE, A. & QUIROZ, J. A., 1946.—"Investigación oftalmológica en la zona oncocercosa de Chiapas." **4**, 209–236.
b. PUIG SOLANES, M. & VERGARA ESPIÑO, L., 1946.—"Nota acerca de la cirugía del cisticerco libre en el vitreo." **4**, 249–264.

319—Archivos del Hospital Clínico de Niños Roberto del Río. Santiago-Chile.

*a. LA MAZA S., V. DE, 1946.—"Estudio clínico de la oxiuriasis, ascaridiasis, lambliasis y amebiasis en un clima templado." **14**, 163–176.

320—Archivos del Instituto de Cardiología de México.

*a. GARCIA CARRILLO, E., 1946.—"El síndrome cardiopulmonar en la muerte del anquilostomiásico." **16**, 154–158.

321—Archivos del Instituto de Cirugía de la Provincia de Buenos Aires.

*a. GOÑI MORENO, I., 1946.—"Quiste hidatídico solitario del mesenterio (2 casos)." **1**, 626–631.
*b. OCAMPO SEGUI, M. A., 1946.—"Quistes hidáticos de los músculos y del tejido celular subcutáneo; a propósito de un caso de localización glútea izquierda." **1**, 747–755.

322—Archivos Internacionales de la Hidatidosis. Montevideo.

a. JORGE, J. M. & RE, P. M., 1946.—"Hidatidosis. Tratamiento biológico." **6** (1 2), 11–85.
b. JORGE, J. M. & RE, P. M., 1946.—"Hidatidosis cardíaca. Vías de infestación." **6** (1/2), 87–114. [English & German summaries pp. 112–113.]
c. GELORMINI, N., 1946.—"Resistencia de los quistes hidáticos extraídos del organismo animal." **6** (1/2), 119–127.
d. GELORMINI, N., 1946.—"El bromhidrato de arecolina como eliminador del *Echinococcus granulosus*." **6** (1/2), 129–134.
e. FERRO, A., 1946.—"Hidatidosis familiar. Contribución a su estudio." **6** (1/2), 135–162.
f. SERRES, J. R., 1946.—"Profilaxis de la hidatidosis equinococósica y su legislación, en la República Argentina." **6** (1/2), 163–205.
g. MENEGHETTI, M. D., 1946.—"A hidatidóse no Rio Grande do Sul." **6** (1/2), 211–225.
h. FOSSATI, A., 1946.—"Quistes hidáticos del pulmón." **6** (1/2), 231–282.
i. PIAGGIO BLANCO, R. A., 1946.—"Ascitis por rotura intraperitoneal de los quistes hidatídicos viscerales del abdomen." **6** (1/2), 288–306.
j. RIOS, B., 1946.—"Enfisema mediastinal consecutivo al 1er. tiempo (extra-pleural) de una intervención por hidatidosis pulmonar." **6** (1/2), 307–312.
k. PÉREZ FONTANA, V., 1946.—"Neumoquiste hidático con tensión." **6** (1/2), 313–318.
l. PÉREZ FONTANA, V., 1946.—"Las complicaciones aeríferas del quiste hidático del pulmón." **6** (1/2), 319–357.

m. PÉREZ FONTANA, V., 1946.—"Quistes hidáticos rotos en el peritoneo. (Correlación de las formas clínicas)." **6** (1/2), 359–377.
n. VIÑAS, M., 1946.—"Equinococosis alveolar humana en la República Argentina." **6** (1/2), 385–392.
o. PÉREZ FONTANA, V., 1946.—"Las membranas de enquistamiento consecutivas a la rotura de quistes hidatídicos en el peritoneo." **6** (1/2), 393–433.
p. PÉREZ FONTANA, V., 1946.—"Addenda. Las membranas consecutivas de enquistamiento. (Trabajo experimental)." **6** (1/2), 434–445.
q. PÉREZ FONTANA, V., 1946.—"*Echinococcus multilocularis* sive *alvéolaris* sive Bavaro-Tirolensis. (Estudio experimental)." **6** (1/2), 447–468.
r. PÉREZ FONTANA, V., 1946.—"Concepto biológico de la enfermedad hidática." **6** (1/2), 469–475.
s. SCOSERIA, C. I., 1946.—"Experiencias sobre la transmisión pasiva de la reagina hidática." **6** (1/2), 477–485.
t. CASSINELLI, J. F., 1946.—"La inclusión de esputos en el diagnóstico de la equinococosis pulmonar." **6** (1/2), 490–571.

(322g) In parts of the state of Rio Grande do Sul, 60% of cattle and 80% of sheep carry hydatid cysts. The incidence of hydatid cases in man is on the increase. Hospital statistics which are tabulated give the numbers treated as 13 in 1941, 23 in 1942, 28 in 1943 and 51 in 1944. A map, giving the incidence of bovine echinococcosis, shows that the infection rate increases from less than 2% in several northern municipalities to 35–80% in the extreme south. R.T.L.

(322s) Scoseria confirms the passive transfer of hydatid allergy in man, varying in intensity with the activity of the sera employed and the sensitivity of the subject. Sera heated at 56°C. for half-an-hour lost their capacity for passive transfer of allergy. The Casoni reaction repeated in the zone of passive transfer was of diminishing intensity: only the early phase was shown. E.M.S.

323—Archivos de Pediatría del Uruguay.

*a. LÓPEZ FERNÁNDEZ, J., 1946.—"Frecuencia de la oxiurosis apendicular infantil en nuestro medio; nota preliminar." **17**, 169–172.

324—Archivos de la Sociedad Argentina de Anatomía Normal y Patológica.

*a. MURRAY, A. J., 1946.—"Un nuevo caso de bilharziosis vesical en la República Argentina." **8**, 133–140.

325—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

a. SUIFFET, W. R., 1946.—"Peritonitis biliohidática aguda. (Coleperitoneo y coleperitonitis hidática aguda)." **28** (2), 186–196.
b. PRAT, D., 1946.—"Sobre cólico hepático seudo litiásico o cólico hepático hidatídico." **28** (6), 604–613.
c. GRAÑA, A. & GAUDIANO, P., 1946.—"El mecanismo de la seudo-litiasis biliar de origen hidatídico." **28** (6), 627–636. [English summary p. 634. Discussion pp. 635–636.]
*d. OSIMANI, J. J., 1946.—"Parasitismo humano por *Dipylidium caninum* (Linneo 1758)." **29** (2), 171–176.
e. PRAT, D., 1946.—"Quiste hidatídico de la región diafragmática derecha." **29** (4), 409–416.
f. SOTO BLANCO, J., 1946.—"Quistes hidatídicos de la región diafragmática derecha." **29** (4), 417–428.
g. ANDREON, E. & BERMUDEZ, O., 1946.—"Quiste hidático de la región diafragmática izquierda." **29** (5/6), 487–498.
h. ARDAO, H. A., 1946.—"Quiste hidático del diafragma." **29** (5/6), 499–508.
i. CHIFFLET, A. & LLOPART, J., 1946.—"Equinococosis hepática y riñón derecho." **29** (5/6), 509–527.

326—Archivos Venezolanos de Puericultura y Pediatría.

*a. FIGUEROA J., M. A., 1946.—"Contribución al diagnóstico y clínica de la oxiuriasis; primeros resultados de su tratamiento en Venezuela con la violeta de genciana." **8** (27), 1471–1521.
*b. MARTÍNEZ NIOCHET, A., 1946.—"Apendicitis aguda por Ascaris." **8** (27), 1522–1526.
*c. URDANETA, E., 1946.—"Consideraciones acerca del tratamiento de las parasitosis intestinales en los niños." **8** (27), 1532–1548.

327—Arkiv för Zoologi.

a. ALLGÉN, C. A., 1946.—"Westnorwegische marine Nematoden." 37A (14), 1–32.

(327a) Allgén reports on the marine nematodes obtained from a sample of mud collected on the coast of the island of Fröya, west of the entrance to Trondheim fiord, Norway. The material contained 443 specimens belonging to 28 genera and 38 species, seven of which proved to be new to science as follows : *Mononcholaimus norwegicus* n.sp., *Eurystomatina fröyense* n.sp., *Desmodora fröyensis* n.sp., *Hypodontolaimus norwegicus* n.sp., *Halaphanolaimus norwegicus* n.sp., *Theristus norwegicus* n.sp. and *Eulinhomoeus gracilisetosus* n.sp. T.G.

328—Arquivos da Assistência a Psicopatas do Estado de São Paulo.

*a. PUPO, P. P., CARDOSO, W., REIS, J. B. DOS & PEREIRA DA SILVA, C., 1946.—"Sôbre a cisticercose encefálica. Estudo clínico, anátomo-patológico, radiológico e do liquido céfalo-raqueano." Year 1945–46, 10–11, 3–118.

329—Arquivos de Biologia e Tecnologia. Curitiba.

a. GIOVANNONI, M., 1946.—"Fauna parasitológia paranaense. III. *Raillietina* (*Skrjabinia*) *bonini* (Mégnin, 1889) em pombos domésticos." 1, 29–31.

(329a) Giovannoni records the presence of *Raillietina* (*Skrjabinia*) *bonini* among the pigeons of Parana, Brazil. The specimens are described. P.A.C.

330—Arquivos do Instituto Biologico. São Paulo.

a. MELLO, M. J. DE & PEREIRA, C., 1946.—"Determinismo da evasão das larvas de '*Habronema*' sp. da tromba da mosca doméstica." 17, 259–266. [English summary pp. 265–266.]

(330a) The larvae of *Habronema* sp. left the proboscis of *Musca domestica* during the normal feeding of these flies on blood, plasma or serum of horses and donkeys but only when the temperature of the environment was not below 22°C. or that of the food below 23°C. This also occurred when the proboscis was extended and immersed in sera of man or other animals ; in sugar solution, honey, dextrin, milk or in horse saliva and sweat it occurred only at 34°–37°C. A diurnal environmental temperature of 22°C. and over seems to be the main factor in determining the incidence of summer sores in Equidae. R.T.L.

331—Arquivos da Universidade da Bahia Faculdade de Medicina.

a. SANTOS, J. C. DOS, 1946.—"Estrongiloidóse associada à schistosomóse e à sífile." 1, 227–250. [English summary p. 247.]

b. LÔBO, R., 1946.—"Poliorromenite esquistosomótica? (Considerações em tôrno de um caso clínico)." 1, 269–281. [English summary p. 283.]

332—Auburn Veterinarian. Alabama.

a. WILLIAMS, J. E., 1946.—"Heartworms—a menace to canine health. A review of the literature." 2 (1), 20–27.

333—Australian Journal of Science.

a. ROGERS, W. P., 1946.—"Scientific method in the evolution of new drugs. Part XIV. Comparative biochemistry and the selection of possible pharmacologically active compounds." 9 (2), 55–59.

(333a) Rogers draws attention to the significance of the major and minor variations in metabolism which give rise to group and species differences and which, on account of their biochemical character, make selective drug action possible. These specific differences, of cell permeability, metabolism, nutrition, etc., should be examined to determine the type of compound to be investigated. More stress should be laid on comparative

biochemistry and biophysics. By following up physiological activity in relation to the manipulation of the compound concerned, highly active and specific drugs might be evolved on purely logical premises. R.T.L.

334—Australian and New Zealand Journal of Surgery.

a. JENKINS, J. A., 1946.—"Pulmonary hydatid disease: the sign of the camelote." 15 (4), 296–298.

335—Berliner und Münchener Tierärztliche Wochenschrift.

a. JACOB, E., 1946.—"Die Parasitologie als zoologische Domäne der Veterinär-Medizin." Year 1946, No. 2, pp. 20–22.

336—Biennial Report of the Division of Fish and Game, California.

a. HANNUM, W. T., 1946.—"Report of the Bureau of Game Conservation." 39th (1944–46), pp. 47–57.

(336a) Helminth parasites of the digestive tract are the chief cause of losses in deer in the coastal counties of California, particularly among fawns and yearlings. Where liver-fluke is a serious problem in cattle and sheep the deer are also infected. The incidence and possible importance of a roundworm [*Onchocerca cervipedis*] which occurs in the feet of deer are being investigated. R.T.L.

337—Biodynamica Monographs.

a. VON BRAND, T., 1946.—"Anaerobiosis in invertebrates." No. 4, 328 pp.

(337a) Von Brand includes in this review of anaerobic metabolism in invertebrates two chapters concerning helminths. In Chapter III, which is a general survey of anaerobic phenomena in invertebrates, pp. 62–84 are devoted to "worms and worm-like organisms", non-parasitic and parasitic forms being considered separately. Research of this type on parasitic species is dependent on the development of techniques for maintaining the worms *in vitro*, and Von Brand gives an account of what has been accomplished and an indication of what needs to be done. In Chapter IV "Anaerobiosis and the origin of endoparasitism", pp. 279–284, the various theories of the origin of the parasitic mode of life are considered critically, and the significance of these theories and those concerning the evolution of the parasitic phyla are examined in relation to anaerobiosis. It is stated that "Most of the contents of this monograph are reprinted from *Biodynamica*, No. 92, 1944 and Nos. 100 and 105, 1945". E.M.S.

338—Biológica. Chile.

a. NOÉ C., J. & LIRA L., E., 1946.—"Estudios biológicos sobre un cestode parásito de *Calyptocephalus gayi* (Dumeril y Bibron). 'Fenómeno de la paraxenobiosis'. Comunicación preliminar." Fasc. 4, pp. 3–22. [English, French & German summaries pp. 14–16.]

(338a) Noé C. & Lira L. were able to complete the life-cycle of *Ophiotaenia noei* Wolffhügel, 1946 [stated to be a nomen nudum but not renamed]. The cestode is parasitic in adult frogs (*Calyptocephalus gayi*), while the cysticercoids inhabit tadpoles of the same host species. This cycle is rendered possible because cannibalism is a normal condition in the host species. The term "paraxenobiosis" is coined to designate this type of life-cycle. E.M.S.

339—Biológico. São Paulo.

a. MELLO, M. J. DE, 1946.—"A esponja." 12 (6), 157–165.
b. CURY, R., 1946.—"Moléstias das abelhas." 12 (10), 241–254.

(339a) An illustrated account of the clinical symptoms, aetiology, diagnosis, treatment and prophylaxis of *esponja*, the local name given in Brazil to the skin lesions of the horse produced by the larvae of *Habronema* spp. R.T.L.

(339b) Among the parasites affecting the bee, *Gordius aquaticus* and *Agamomermis albicans* are mentioned. R.T.L.

340—Biologisch Jaarboek.

a. WERFF, A. VAN DER, 1946.—"Het voorkomen van wormachtige dieren in Nederlandse waterleidingsbedrijven." 13, 251–255.

(340a) This is a brief survey of the "worm" fauna of Dutch waterworks. Turbellaria are found in the filters and filtrates. Nematodes are very abundant and four species in particular are mentioned: *Actinolaimus macrolaimus* De Man, *Dorylaimus carteri* Bastian, *Mononchus macrostoma* Bastian and *Plectus tenuis* Bastian. Oligochaetes and nemertineans are also referred to. M.T.F.

341—Boletim da Escola Nacional de Veterinária. Rio de Janeiro.

a. MACHADO FILHO, D. A., 1946.—"Sôbre *Moniliformis moniliformis* (Bremser), *Moniliformis travassosi* Meyer, 1932 e outras espécies duvidosas do gênero (Acanthocephala)." Year 1945, 1, 13–27.

(341a) Machado Filho has examined specimens of *Moniliformis* from a variety of hosts and compared them with Chandler's description of *M. dubius*. He agrees that *M. dubius* is the same as *M. travassosi* and that both are probably synonyms of *M. moniliformis*. He lists some 50 synonyms of *M. moniliformis*. *M. spiradentatis* MacLeod, 1933 is referred to *M. clarki*. E.M.S.

342—Boletín de la Academia Nacional de Medicina de Buenos Aires.

a. JORGE, J. M. & FERRO, A., 1946.—"Hidatidosis. Enfermedad invalidizante. Debe figurar entre las enfermedades profesionales u ocupacionales." Year 1946, No. 4/8, pp. 239–247. [Discussion pp. 248–254.]

343—Boletín de la Asociación Médica de Puerto Rico.

a. BARRERAS, H. R. & THOMEN, L. F., 1946.—"Verminosis poco frecuentes en Santo Domingo." 38 (4), 129–131.
b. HERNÁNDEZ MORALES, F., MALDONADO, J. F. & PRATT, C. K., 1946.—"Diagnóstico de la esquistosomiasis de Manson por medio de la biopsia del recto." 38 (7), 253–263.

(343a) A summary is given of two cases of human infestation with *Fasciola hepatica* and three with *Hymenolepis nana* which have been reported in the Dominican Republic. E.M.S.

(343b) [This paper has already appeared in English in *Amer. J. trop. Med.*, 1946, 26 (6), 811–821. For abstract see Helm. Abs., Vol. XV, No. 159m.]

344—Boletín de la Asociación Médica de Santiago. Santiago de los Caballeros.

*a. BUENO T., S., 1946.—"*Inermicapsifer cubensis*." 4, 146–147.

345—Boletin Mensual. Dirección de Ganadería, Montevideo.

a. CASSAMAGNAGHI, Jr., A., 1946.—"La oesofagostomosis suina. Dos especies reconocidas en los cerdos del país. Su importancia económica." Year 1946, 29 (1), 429–442.
b. POU, M. C., FIELITZ, F. O. & RODRÍGUEZ GONZÁLEZ, M., 1946.—"Los enemas de peróxido de hidrógeno H_2O_2 (agua oxigenada) diluído para la deshelmintización de *Felis catus domesticus*." Year 1946, 29 (1), 450–454.
c. CASSAMAGNAGHI, Jr., A., 1946.—"*Amidostomum anseris* en *Anser anser domesticus*." Year 1946, 29 (3), 618–623.
d. RODRÍGUEZ GONZÁLEZ, M. & BREGANTE, L. J., 1946.—"Acción 'in vitro' del H_2O_2 sobre parásitos intestinales. 2.a comunicación." Year 1946, 29 (3), 624–628.

(345a) Oesophagostomiasis of some economic importance in pigs in Uruguay is attributed to *Oesophagostomum dentatum* and *O. longicaudum*. R.T.L.

(345b) Nine cats with Toxocara and one with Trichuris infection, as shown by faecal examinations, were given enemata of 200–250 c.c. of diluted hydrogen peroxide. In nine cases the faeces became entirely free of helminth eggs. R.T.L.

(345c) This brief description of *Amidostomum anseris* from the domestic goose indicates that it occurs in Uruguay as well as in Europe, Asia, Africa and North America. R.T.L.

(345d) *Ascaris lumbricoides* are killed in a few minutes *in vitro* by dilutions of 3%, 4% and 5% hydrogen peroxide (10 vol.). The rapidity of action is correlated with the strength of the solution. R.T.L.

346—Boletín de la Sociedad de Biología de Concepción (Chile).

*a. WILHELM G., O., 1946.—"Factores carenciales en la patogenia de la anemia ancylostomasica." 21, 29–52.

347—Boletín de la Sociedad de Cirugía del Uruguay.

*a. CHIFFLET, A. & LLOPART, J., 1946.—"Equinococosis hepática y riñón derecho." 17, 147–165.

348—Boletines y Trabajos. Academia Argentina de Cirugía.

a. COPELLO, O., 1946.—"Neumotórax espontáneo de una quistica residual." 30 (6), 223–226.
b. LANDÍVAR, A. F., 1946.—"Equinococosis de hueso coxal." 30 (20), 833–835. [Discussion pp. 834–835.]
c. GOÑI MORENO, I., 1946.—"Vía de abordaje transdiafragmática para quiste hidatídico de la base pulmonar." 30 (23), 974–976.

349—Boletines y Trabajos. Sociedad Argentina de Cirujanos.

*a. CASIRAGHI, J. C., 1946.—"Hemoptisis y hemorragias en los quistes hidatídicos del pulmón." 7 (15), 539–549.

350—Boletines y Trabajos. Sociedad de Cirugía de Córdoba.

*a. POLETTO, E., 1946.—"Quiste hidático de mama." 7, 153–156.
*b. TORRES, G. A., 1946.—"Hidatídosis de columa vertebral tratada con antigeno hidático." 7, 211–213.

351—Bollettino e Memorie della Società Piemontese di Chirurgia.

*a. COSTANTINI, A., 1946.—"Cisti da echinococco solitaria del coledoco." 16, 481–486.

352—Bollettino della Società Italiana di Biologia Sperimentale.

a. PALUMBI, G., 1946.—"Osservazioni sulla struttura della cellula muscolare della parete del corpo di *Ascaris megalocephala*." 22 (5), 500–501.

353—Bollettino della Società Italiana di Medicina e Igiene Tropicale (Sezione Eritrea).

a. D'IGNAZIO, C., 1946.—"Sulle parassitosi intestinali di Etiopia." 6 (5), 227–236.

(353a) Brief notes record the presence of Ascaris, Trichuris, Strongyloides, Enterobius, hookworm, Hymenolepis and Taenia in Ethiopia. In 103 persons in the Villaggio di Ambò, Ascaris occurred in 33 and *Taenia saginata* in 7. In the Villaggio di Sciabe, of 207 persons 102 had Ascaris, 25 Trichuris, 3 Strongyloides, 2 Enterobius and one *T. saginata*. Strongyloides is said to be common in Addis Ababa. R.T.L.

354—Bordeaux Chirurgical.

*a. BARROUX, R. & DOUTRE, L. P., 1946.—"Sur un cas d'ascaridiose duodéno-jéjunale avec occlusion aiguë et syndrome de perforation." Year 1946, No. 1 2, pp. 60–61.

*b. RIGAUD & CARPENTIER, 1946.—"A propos de six cas de kystes hidatiques de poumon opérés par la méthode en deux temps (pneumotomie à plèvre symphysée)." Year 1946, No. 3 4, pp. 88–93.

355—Brasil-Medico.

a. BOECHAT, W. M., 1946.—"Apendicite esquistosomótica." 60 (33 35), 277–280.

356—British Heart Journal.

a. BEDFORD, D. E., AIDAROS, S. M. & GIRGIS, B., 1946.—"Bilharzial heart disease in Egypt: cor pulmonale due to bilharzial pulmonary endarteritis." 8 (2), 87–95.

(356a) In Egypt cor pulmonale with gross dilatation of the pulmonary artery is usually found in young adults suffering from advanced visceral or severe genito-urinary bilharzial infection. As the number of cases recorded hitherto is scanty a new case is reported in which an aneurysmal dilatation of the pulmonary artery is attributed to bilharzial endarteritis of the pulmonary arterioles. R.T.L.

357—British Journal of Surgery.

a. KIRKALDY-WILLIS, W. H., 1946.—"Cystoscopy in the diagnosis and treatment of *Bilharzia haematobium* infection." 34 (134), 189–194.

(357a) Kirkaldy-Willis is convinced from experience in the Giriama Reserve, near Mombasa, that cystoscopy is essential to clinch the diagnosis of bilharzial infection and to assess the efficacy of treatment. In the coast Province of Kenya, especially in the native reserves, urinary schistosomiasis is extremely common: it is estimated that 90% of the Wagiriama are infected. The author describes the cystoscopic appearances, differential diagnosis, treatment and sequelae of the disease, with three coloured illustrations. R.T.L.

358—Bulletin de l'Académie de Médicine. Paris.

a. GALLIARD, H., 1946.—"La sparganose oculaire." 3e Série, 130 (31/33), 574–576.

359—Bulletin de l'Académie des Sciences de l'URSS. Série Biologique.

a. VINNITSKI, I. M., 1946.—[Evolution of the cycles of development in the order of Ascaridata (nematodes).] No. 4, pp. 415–430. [In Russian: English summary p. 430.]

(359a) Vinnitski believes that the evolution of the Ascaridata is dependent not upon the loss of one of two hosts but upon the appearance of intermediate hosts in their developmental cycle, i.e., facultative: different mammals (family Ascaridae)—or obligatory: fishes for the sea mammals and birds (family Anisakidae). If there is no possibility of infestation through a vertebrate intermediate host, as for instance in the hen or pigeon (family Ascaridae), the migration of larvae disappears in the evolutionary process as having evidently no purpose. R.T.L.

360—Bulletin de l'Académie Vétérinaire de France.

a. NICOLAS, E., 1946.—"Au sujet de la thiodiphénylamine ou phénothiazine et des thiazines et de leur emploi comme anthelminthiques et antidiarrhéiques." 19 (4), 111–117. [Discussion pp. 117–118.]

b. COMMÉNY, H., DRIEUX, H. & VERGE, J., 1946.—"Localisation hépatique d'*Ascaris suum*." 19 (6), 190–195.

(360a) Nicolas briefly outlines the chemistry of phenothiazine and its derivatives, and points out that important derivatives are thionin and methylene blue. Whilst thionin has not been used therapeutically, methylene blue is an important antiseptic and analgesic, and has been used as an anthelmintic, especially in foals. E.M.S.

(360b) A case of invasion of the bile ducts in a pig by *Ascaris lumbicoides* var. *suis* is illustrated and described. Its clinical, anatomical and pathological aspects are discussed with references to previous records. The authors believe that the presence of these worms in this abnormal location resulted from the migration of young adults from the intestine into the bile ducts, and not from the development of Ascaris embryos *in situ*. R.T.L.

361—Bulletin Agricole du Congo Belge.

a. WERY, J. E., 1946.—" La stephanurose. Une cause d'échec dans l'élevage du porc au Congo Belge." **37** (4), 869–876.

(361a) [This paper has already appeared in *Ann. Méd. vét.*, 1946, **90** (4), 117–125. For abstract see above, No. 307a.]

362—Bulletin. Council for Scientific and Industrial Research. Australia.

a. GORDON, H. McL. & TURNER, H. N., 1946.—" Grazing management : continuous and rotational grazing by Merino sheep. 2. The effect of continuous and rotational grazing on the infestation of sheep with internal parasites." No. 201, pp. 85–96.

(362a) The authors remark that the value of these experiments concerning the effect of continuous and rotational grazing on the degree of intestinal parasitism in sheep was reduced by the age and small number of the sheep, the lightness of the infections and the absence of comparable levels of infection at the commencement of the trial. The commonest infections were *Haemonchus contortus*, *Trichostrongylus* spp. and *Chabertia ovina*. It is concluded that rotational grazing did not favour the development and persistence of infections with *H. contortus* and *Trichostrongylus* spp. and that the parasitism had no demonstrable effects on the body-weight or the total weight of wool under the conditions of the trial. R.T.L.

363—Bulletin. Department of Agriculture, Tasmania.

a. TASMANIA. ANIMAL HEALTH SERVICE, 1946.—" The parasite, the man, the dog, and the stock." No. 3, 15 pp.

364—Bulletin. Department of Health, Kentucky.

*a. ANON., 1946.—" Trichinosis and undercooked pork." **18**, 529.

365—Bulletin de l'Institut d'Hygiène du Maroc.

a. GAUD, J., FAURÉ & SOLÉ, 1946.—" Variations dans le temps des index d'infestation humaine dans la bilharziose vésicale marocaine." **6**, 55–60.
b. GAUD, J. & MAURICE, A., 1946.—" Foyers de bilharziose vésicale dans le Sous." **6**, 61–62.

(365a) Striking variations which were observed in the incidence of urinary schistosomiasis in four foci in Morocco in successive years suggest that the disease may occasionally become epidemic. This depends on the abundance or rarity of the molluscan vectors. R.T.L.

(365b) In the Sous region of Morocco, in July 1947, urinary schistosomiasis was found in children at Km. 44 (10%), at Aït Baha (79%) and at Tanalt (86%). R.T.L.

366—Bulletin of the Johns Hopkins Hospital.

a. WINKENWERDER, W. L., HUNNINEN, A. V., HARRISON, T., BILLINGS, F. T., CARROLL, D. G. & MAIER, J., 1946.—" Studies on schistosomiasis japonica. 2. Analysis of 364 cases of acute schistosomiasis with report of results of treatment with fuadin in 184 cases." **79** (6), 406–435.

(366a) The course is analysed of an epidemic of schistosomiasis japonica on Leyte in the Philippines, involving 364 individuals not previously exposed to the disease. The

results obtained in 210 patients treated with fouadin are reported in detail. The total dose was 40 c.c., and relapse occurred in 70 of 165 cases which were followed (42%); symptoms reappeared in only four of these. Eggs disappeared from the stools usually between the 10th and the 16th days of treatment, and symptoms of acute disease subsided at approximately the same time. The finding of characteristic intestinal nodules on sigmoidoscopic examination was helpful in detecting relapses, as these nodules occurred in the absence of eggs from the stools. E.M.S.

367—Bulletins et Mémoires de la Société Française d'Ophtalmologie.

a. DROUET, THOMAS, HERBEUVAL & HENRY, 1946.—"Origine parasitaire de certaines hémorragies du vitré." (For 1940–1946), **59**, 247–255. [Discussion p. 255.]

(367a) Five patients showed haemorrhagic conditions of the vitreous humour without any of the known causal conditions. All showed a strongly positive skin reaction to Ascaris and all but one had eggs in the faeces. It is suggested that the eye condition may be due to Ascaris sensitization. E.M.S.

368—Bulletin. Ministry of Agriculture, Egypt. Technical and Scientific Service (Veterinary Section).

a. EZZAT, M. ABD EL-MONEIM, 1946.—"Experimental studies of the anthelmintic action of phenothiazine on some Egyptian animals." No. 246, in English 14 pp., in Arabic 16 pp.

(368a) Phenothiazine did not give rise to toxic symptoms in calves following doses of 15 gm. to 60 gm., or in sheep after 15 gm. to 20 gm. doses. In calves *Ostertagia* sp. persisted after 40 gm. but not after 45 gm. No effect on *Cooperia* sp., *Bunostomum* sp. or *Moniezia* sp. resulted from 60 gm. doses. In horses a high percentage of *Oxyuris equi* as well as strongyles were expelled by phenothiazine, but on Ascaris it had no effect. R.T.L.

369—Bulletin du Muséum National d'Histoire Naturelle. Paris.

a. DORIER. A., 1946.—"Révision de quelques espèces de Gordiacés." 2e Série, 18 (6), 480–494.

(369a) Dorier has examined the type material, preserved at the Museum of Natural History, Paris, of the specimens of gordiids on which Villot in 1874 erected 14 different species. He sets out the results of his observations with drawings, and finally gives reasons for the following procedure. He rejects *Gordius gracilis* and *G. laevis* because they are mermithids. He also rejects *G. reticulatus* and *G. blanchardi* owing to their having insufficient differential features. *G. trilobus* is made a subspecies as *Paragordius tricuspidatus trilobus*. The following are retained: *G. incertus*, *G. aeneus*, *G. deshayesi*(?), *Chordodes caledoniensis* (Villot), *Gordionus prismaticus* (Villot), *Gordionus chinensis* (Villot) and *Gordionus abbreviatus* (Villot). T.G.

370—Bulletin de la Société des Sciences de Nancy.

a. CONDÉ, B. & HUSSON, R., 1946.—"Fréquence du cestode *Nematotaenia* chez la grenouille rousse." Year 1946, No. 9, pp. 8–9.

(370a) *Nematotaenia dispar* was found in 29·5% of 176 *Rana temporaria* purchased in Nancy. The number of scolices from each frog varied from 195 to below 30. R.T.L.

371—Bulletin de la Société Zoologique de France.

a. NIGON, V., 1946.—"Le déterminisme du sexe chez un nématode libre hermaphrodite: *Rhabditis dolichura* Schneider (note préliminaire)." **71**, 78–84.

(371a) Nigon cultivated the nematode *Rhabditis dolichura* on a synthetic medium containing lecithin and bakers' yeast. The species is a protandrous hermaphrodite in which the paired gonads first produce sperms, which are stored and fertilize the eggs

produced later. Though preponderantly female, occasionally males are produced and such males when crossed with females of the same generation give rise to progeny in which the proportion of males is rather higher (27–36%). Nigon has studied the cytology of spermatogenesis and oogenesis and shows that males are heterogamic and the females homogamic. T.G.

372—Bulletin of the Society of Medical History. Chicago.

*a. WARD, H. B., 1946.—"Medical zoology in America's first century." 5, 424–441.

373—Bulletin. Tea Research Institute of Ceylon.

a. GADD, C. H., 1946.—"Report of the mycologist for 1945." No. 27, pp. 26–29.

(373a) Gadd states that numerous reports have been received of damage to dadaps [*Erythrina*] caused by *Heterodera marioni*. An experiment is described in which tea seedlings were grown in soil infected with the meadow nematode, *Pratylenchus pratensis*. The number of worms which could be extracted from the lateral roots of four seedlings by soaking them for seven days in water showed a great increase in the fifth month of the experiment. Nearly 3,000 were found as compared with 437 and 612 in the third and fourth months respectively. Numerous worms of other species were also found. The distribution of *P. pratensis* in the roots and surrounding soil was investigated, but no relationship was apparent between the numbers in the roots and in the soil. An account is given of the distribution of *P. pratensis* in a recently cleared area planted with tea. M.T.F.

374—Bulletin of the United States Army Medical Department.

a. KANE, C. A. & MOST, H., 1946.—"Central nervous system schistosomiasis: experiences in World War II and review of the literature." [Abstract.] 6 (2), 91–93.
b. ANON., 1946.—"Survey of intestinal parasites in soldiers being separated from service." 6 (3), 259–262.
c. OPPENHEIM, J. M., WHIMS, C. B. & FRISCH, A. W., 1946.—"Clinical and laboratory observations on 256 cases of trichinosis." 6 (5), 581–593.
d. KATZIN, B. & MOST, H., 1946.—"Cercarial antigen (*S. mansoni*) skin test in diagnosis and management of schistosomiasis japonica." 6 (5), 613–616.

(374a) [A fuller account of this paper appears in *Arch. Neurol. Psychiat., Chicago*, 1948, 59 (2), 141–183. For abstract see Helm. Abs., Vol. XVII, No. 155a.]

(374c) 256 cases of trichinosis occurred in a camp for German prisoners-of-war in Michigan. Symptomatic treatment only was used; all except two men returned to work within six weeks of the onset of the disease. The eosinophilia was in inverse relation to the clinical severity. No larvae were found in blood, faeces, spinal fluid or gastric contents, and one only of muscle biopsies was positive. R.T.L.

(374d) A 1 : 5,000 dilution of antigen prepared from *Schistosoma mansoni* cercariae by Oliver-González gave positive intradermal reactions in 98% of 54 patients known to be infected with *S. japonicum*. It is suggested that this skin test may be useful in ascertaining if treatment has been adequate. R.T.L.

375—Bulletin. University of Maryland Extension Service.

a. COX, C. E. & JEFFERS, W. F., 1946.—"Root-knot." No. 113, 23 pp.

(375a) Cox & Jeffers have written a well illustrated circular on the root-knot nematode, *Heterodera marioni*, addressed primarily to farmers and gardeners. Symptoms of attack are described, lists of susceptible, less susceptible and resistant host plants are given and recommendations are made concerning the use of resistant hosts during crop rotations. Control measures are discussed, and the use of steam sterilization and the newer soil fumigants, such as Larvacide, Dowfume G, Iscobrome and D-D, is recommended. T.G.

376—Bulletin. Washington State Agricultural Experiment Station.

a. GOULD, C. J., 1946.—"Narcissus diseases in Washington." No. 480, 27 pp.

(376a) In this bulletin dealing mainly with fungal and virus diseases, Gould also gives an account of eelworm disease of narcissi. He describes the chief symptoms in bulb and foliage, gives a brief account of the causal agent, *Ditylenchus* [=*Anguillulina*] *dipsaci*, and indicates methods of control including the suggested harvesting of infested lots somewhat earlier than normal and their treatment in the warm-water bath within three weeks of lifting. T.G.

377—California Fish and Game.

a. HERMAN, C. M. & BISCHOFF, A. I., 1946.—"The foot worm parasite of deer." 32 (4), 182–190.

(377a) *Onchocerca cervipedis* is reported from deer in California and varies in incidence from 42% to 80% in a number of areas. It was not found in antelopes. Worms were found only in the feet, particularly in the region of the hock joint. The greatest number of worms collected from a single foot was 73. Openings in the skin were attributable to the worms : in one case a gravid female protruded through the opening. R.T.L.

378—Campo y Suelo Argentino. Buenos Aires.

*a. RODRÍGUEZ LOUSTAU, J. A., 1946.—"Dos enfermedades del perro trasmisibles al hombre." **30** (357), 60–62.

*b. LÓPEZ, A., 1946.—"Régimen alimentacio y parasitosis internas de los ovinos." **30** (358), 20–22.

*c. BALMACEDA, R. H., 1946.—"Enfermedades del ovino ; strongilosis gastro-intestinal (lombrix)." **30** (361), 26–27.

*d. LOPEZ ARIAS, A., 1946.—"Alimentación y parasitos internos de los ovinos." **30** (362), 8–9, 72.

379—Časopis Československých Veterinářů.

a. JURNÝ, F., 1946.—"Píštel kohoutková způsobená onchocerkami." **1** (11), 260–265.

b. SUCHOVERSKÝ, E., 1946.—"Boj proti cizopasníkům domácích zvířat." **1** (18), 404–405.

(379a) Out of 982 surgical cases examined over a period of 18 months 137 horses had fistulous withers. In 13 of these it was shown by X-rays that the condition was not due to Onchocerca, but in half of the remainder surgical operation revealed adult Onchocerca ; in the rest larvae were found in scrapings from the pars cucullaris of the ligamentum nuchae. Full details of the surgical operation for this condition are given and the importance of thorough extirpation of all affected tissues is emphasized. C.R.

(379b) Suchoverský discusses the importance of parasitic diseases of domestic animals with special reference to *Fasciola hepatica*. According to him cows infested with liver-fluke lose about 50 kg. in weight, and 40–50 kg. of butter is lost in a year as the daily milk yield is reduced to 2–3 litres instead of 10. He discusses diagnosis and treatment of fluke in cattle and sheep. C.R.

380—Chacaras e Quintaes. São Paulo.

*a. CRUZ, H. M. DA & LIMA, L. T. F., 1946.—"Doença do anel vermelho dos coqueiros no Brasil." **74**, 608.

381—Chinese Medical Journal. Shanghai.

a. PAK, C., 1946.—"Studies on acquired tolerance to tartar emetic, antimony sodium thioglycollate and neostam." **64** (7 8), 181–202. [Chinese summary p. 202.]

b. HU, S. M. K., 1946.—"Notes on the experimental infection of *Culex pipiens* var. *pallens* Coq. with *Microfilaria malayi* Brug." **64** (7 8), 213–218. [Chinese summary p. 218.]

c. WU, K., 1946.—"*Fasciolopsis* in guinea pigs with a summary of the definitive hosts." **64** (7/8), 219–224. [Chinese summary p. 224.]

(381b) Of 242 *Culex pipiens* var. *pallens* fed on a case of *Microfilaria malayi* showing microfilarial counts ranging from 252–620 per 20 cu. mm. of blood, only five, i.e. 2·06%, showed infective larvae on dissection later. In 19 mosquitoes there were dead first-stage larvae which were completely encapsulated. R.T.L.

(381c) Immature *Fasciolopsis buski* developed in one out of 16 guinea-pigs fed with cysts from the skin of the red water caltrops. Spines were observed on the dorsal as well as on the ventral surface in fresh specimens. A table is given collating from the literature previous attempts at experimental infection. The rabbit appears to be the most favourable experimental host. The specimens obtained from dogs were immature. R.T.L.

382—Chrysanthème.

a. LEMASSON, J., 1946.—"Contribution à l'étude de la maladie vermiculaire." **50** (295), 8–10.

(382a) In this popular article Lemasson describes the factors influencing the course and occurrence of eelworm disease of chrysanthemums. He states that the causal nematode [of which the name is incorrectly given] normally lives saprophytically in the soil and that young plants and cuttings are not attacked except in varieties which are "finished". He considers that sterilization of soil or cuttings is useless and that the only way to combat the disease is by cultivating resistant varieties with well balanced nutrition on well drained soils. In seasons which are not too rainy he considers that good plants can be obtained in this way. In a footnote, Fox Wilson points out that the eelworm is a specialized parasite and not a saprophyte. M.T.F.

383—Circular. California Agricultural Experiment Station.

a. ALLEN, M. W., 1946.—"Control of root-knot nematode with D-D mixture and chloropicrin." No. 365, pp. 62–65.

(383a) Allen reports good results from the use of D-D to control *Heterodera marioni* in a light sandy loam in California, of 11% moisture and at 75°F. In a 6×6 Latin square the treatments were: control, D-D at 18-in. spacing at 100, 200 and 300 lb. per acre, and, at 12-in. spacing, D-D and chloropicrin both at 200 lb. per acre. Carrots were planted after six days, soil samples being taken then and after two months, using tomatoes in pots as indicators. Significant nematicidal effects were shown after six days by D-D at 200 and 300 lb. and by chloropicrin, and after two months by all D-D treatments but not by chloropicrin. Yields, greatly increased by all treatments, turned an economic loss into a fair profit. Weights of nematode-infested culls showed D-D at 200 lb. per acre and 12-in. spacing to be the best treatment. B.G.P.

384—Circular. Texas A. & M. College Extension Service.

a. GRIST, E. A. & TURK, R. D., 1946.—"Control of the common stomach worms in cattle." No. C-222, 8 pp.

385—Circular. Texas Agricultural Experiment Station.

a. YOUNG, P. A., 1946.—"Tomato diseases in Texas." No. 113, 66 pp.

(385a) For the control of *Heterodera marioni* in tomatoes the precautions recommended are the avoidance of setting plants which show infection and the use of soil free from nematodes in hotbeds and cold frames. Control methods by soil fumigation are costly but justifiable, unless the crop is worth less than 500 dollars per acre when crop rotation is suggested, with sorghum and velvet beans in succession for three years, succeeded by cowpeas, corn and sweet potatoes in the following three years. In Bermuda grass pasture,

properly mown, infection is not likely to remain for more than five years. Fallowing does not control root-knot satisfactorily as many weeds are susceptible. Ploughing 3, 5 and 7 inches deep in succession at about 7-day intervals in hot dry weather decreases the number of these nematodes significantly. R.T.L.

386—Citrus Industry.

*a. TISDALE, W. B., 1946.—"Soil treatment for preventing plant diseases." 27 (4), 12–14.

387—Clinica Veterinaria. Milan.

a. CECCARELLI, A., 1946.—"La ricerca della urobilina nella echinococcosi epatica dei bovini." 69, 129–132.

388—Clinical Medicine.

a. MARPLE, C. D., 1946.—"Common intestinal parasites and their treatment." 53 (9), 258–259.

389—Clinical Proceedings. Journal of the Cape Town Post-Graduate Medical Association.

a. KEEN, E. N., 1946.—"Clinicopathological case. XIII." [Hydatid cyst in the pancreas.] Year 1945, 4 (10), 605–611.

390—Collected Papers of the Mayo Clinic and the Mayo Foundation.

a. BOLLMAN, J. L., 1946.—"The influence of dietary factors on the resistance of rats to carbon tetrachloride." Year 1945, 37, 814–817.

391—Comptes Rendus des Séances de la Société de Biologie. Paris.

a. LAGRANGE, E., 1946.—"A propos de l'action toxique de quelques colorants organiques sur *Cysticercus pisiformis*." 140 (25), 1129.

(391a) Lagrange has evidence which suggests that alizarin and certain of its derivatives will kill cystercerci *in situ*. It is readily absorbed through the intestinal mucosa, and in concentrations of 1 in 10,000 will prevent the evagination of the scolex of *Cysticercus pisiformis*. P.A.C.

392—Connecticut State Medical Journal.

a. VERSTANDIG, C. C., 1946.—"Probable echinococcus disease of the heart. Review of literature with case report." 10 (10), 830–833.

393—Crónica Médica. Lima.

a. VALDIVIA PONCE, O., 1946.—"Parasitismo intestinal en la provincia de Islay." Año 63, No. 997, pp. 175–179.

(393a) A survey of intestinal infection with helminths in the Province of Islay, Peru, showed an incidence of *Hymenolepsis nana* 8·26%, *Trichuris trichiura* 1%, *Enterobius vermicularis* 1·41%, *Taenia saginata* and *Ascaris lumbricoides* each 0·8%. R.T.L.

394—Cultuur en Handel. Brussels.

a. SCHENCK, P. J., 1946.—"Stengel-, blad- en wortelaaltjes." 12 (12), 28–31.

(394a) This is a popular account of stem, leaf and root eelworms as they affect cultivated plants. The nematodes mentioned are *Ditylenchus dipsaci*, *Aphelenchoides fragariae*, *A. ritzema-bosi*, *A. olesistus* and *Heterodera marioni*. Very brief accounts are given of their life-histories, the symptoms produced on the hosts (illustrated) and general methods of control. M.T.F.

395—Daffodil and Tulip Yearbook.

a. MOORE, W. C., 1946.—"Recent research on daffodil diseases." No. 12, pp. 71–77.

(395a) In the last section of this article Moore deals briefly with root rot of daffodils which occurs in certain parts of England. The nematode *Anguillulina pratensis* has occasionally been found associated with the condition but whether it is the real cause of the trouble has not been fully ascertained. T.G.

396—Dermatologica. Basle.

a. BÖRLIN, E., 1946.—"Klinische Untersuchungen mit Askaridenallergenen." 92 (4), 187–198. [English & French summaries pp. 197–198.]

(396a) The immediate reaction to ascaris antigen was tested in 198 patients, mainly adults. Only 55 were infected at the time of the test, while 24 had had ascariasis, and 119 had no history of infection past or present; in these three groups the test was positive in 7·3%, 20·8% and 14·3% respectively. The test is therefore of no diagnostic value in ascariasis. E.M.S.

397—Ders Kitabi. Ankara Yüksek Ziraat Enstitüsü.

a. BERKER, S. Z. & ÖKTEM, B., 1946.—"Evcil hayvanların göz hastalıkları." No. 36, vi + 112 + viii pp.

(397a) In this treatise on the eye diseases of animals brief mention is made of *Filaria papillosa, F. palpebralis, F. irritans* and the various species of *Thelazia* concerned in parasitic conjunctivitis. R.T.L.

398—Día Médico. Buenos Aires.

a. GRAÑA, A., 1946.—"El diagnóstico biológico de la hidatidosis." 18 (13), 306–307.
b. BADO, J. L., 1946.—"Apuntes sobre equinococosis osea." 18 (25), 762–764, 766–767.
*c. GRAÑA, A., 1946.—"Alergia y diagnóstico biológico de la hidatidosis." 18 (41), 1490–1500.

(398c) [This paper has already appeared in *Arch. urug. Med.*, 1945, 26 (6), 538-559. For abstract see Helm. Abs., Vol. XIV, No. 76a.]

399—Doklady. Moskovskaya Ordena Lenina Selskokhozyaistvennaya Akademiya imeni K. A. Timiryazeva.

a. BURDELEV, T. E., 1946.—[Effect of phenothiazine on goats.] No. 3, pp. 171–176. [In Russian.]

(399a) Burdelev used phenothiazine in doses of 0·5–3·0 gm. per kg. body-weight for young goats and found that it did not produce pathological lesions in the organs nor blood changes, but albuminuria developed in some animals. A dose of 13 gm. per kg. body-weight was found to be toxic. He does not recommend phenothiazine for animals with kidney diseases. C.R.

400—East African Medical Journal.

a. CAWSTON, F. G., 1946.—"Laboratory tests for schistosomiasis." [Correspondence.] 23 (6), 188–189.

(400a) Cawston points out that antigen for testing patients for schistosome infection cannot be regarded as specific. More reliance has been placed on the eosinophile count but this too may depend on other factors. Laboratory results of urine examination may also be deceptive. He states that a total of 50 c.c. of anthiomaline is sufficient to cure young patients, especially if the drug is given in rapidly increasing strength up to even 5 c.c., although few tolerate 3·5 c.c. doses. R.T.L.

401—Ecological Monographs.

a. PEARSE, A. S., 1946.—" Observations on the microfauna of the Duke Forest." **16** (2), 127–150.

(401a) This monograph deals with the fauna, mainly arthropod, of litter and soil samples of the Duke Forest as collected by heating over Berlese funnels. Only 13 specimens of Nematoda were retained by the funnels although they were probably present in thousands. R.T.L.

402—Experientia. Basle.

a. SCHINDLER, O., 1946.—" Substanzen mit askarizider Wirkung." 2 (2), 69–70. [English summary p. 70.]

(402a) Of various unnamed substances tested *in vitro* against *Ascaris lumbricoides*, three were as effective as thymol. They are, however, much less soluble in water. D.D.T. at a concentration of 1 in 1,000 was without effect up to seven hours' exposure. E.M.S.

403—Experimental Medicine and Surgery. New York.

a. ROCHA E SILVA, M., ANDRADE, S. O. & TEIXEIRA, R. M., 1946.—" Coagulation defect in the shocks produced by trypsin, peptone and ascaris extracts." 4 (3), 260–277.

404—Extension Bulletin. Washington State College.

a. ANON., 1946.—" Worms in poultry." No. 355, 7 pp.

405—Extension Circular. Oregon State College.

a. ANON., 1946.—" Sodium fluoride for removing large roundworms from swine." No. 485, 3 pp.

(405a) [This publication was reprinted by permission of the U.S. Department of Agriculture. For abstract of the original see below, No. 626.]

406—Federal Veterinarian. Oklahoma City.

a. ANON., 1946.—" Sodium fluoride for removing large roundworms from swine." 3 (2), 3.

407—Florida Grower.

*a. TAYLOR, A. L., 1946.—" Costs cut for improved root-knot control : efficient, less expensive soil fumigation opens way to better and more varied crops for Florida." 55 (12), 6.

408—Gaceta Médica de México.

*a. FOURNIER VILLADA, R., 1946.—" Dos casos de *Fasciola hepática* encontrados en México." 76, 208–212.

409—Galicía Clínica. Coruña.

*a. CERDEIRA CRESPO, G., 1946.—" Parasitosis intestinal por *Anquilostoma duodenal* y *Tricocephalus dispar*." 18 (12), 747–755.

410—Gastroenterology. Baltimore.

a. MILANES, F., CURBELO, A., RODRIGUEZ, A., KOURI, P. & SPIES, T. D., 1946.—" A note on bacteriological and parasitic studies of the intestinal contents of patients with sprue." 7 (3), 306–313.

b. WILLARD, J. H., 1946.—" Intestinal parasites in service personnel in the South Pacific : with special reference to the incidence and treatment of strongyloidiasis." 7 (6), 650–655.

(410b) Of 1,371 U.S. service personnel in a Naval Hospital in New Zealand, 27% showed helminth eggs in the faeces, viz., hookworm 8·58%, Trichuris 2·07%, Strongyloides 1·26%, Ascaris 0·37%, Enterobius, *Hymenolepsis nana* and *Taenia saginata* 0·7% each. Ten of the cases of strongyloidiasis received orally a one-grain enteric-coated tablet of gentian violet thrice daily, a full course consisting of 50 doses : there were three apparent cures. Four out of five patients were cured after intraduodenal instillations of 3–25 c.c. of a 1% solution of gentian violet. R.T.L.

411—Gazeta Clínica.

a. MEIRA, J. A., 1946.—"Tratamento das verminoses." 44 (5/6), 93–121.

412—Gazette Médicale de France et des Pays de Langue Française.

*a. BRUMPT, L. C., 1946.—"Le traitement des polyglobulies par l'ankylosto mothérapie." 53 (6), 125–127.

413—General Practitioner. Los Angeles.

*a. GORDON, S. G., 1946.—"Is epilepsy a result of tapeworm?" 9 (4), 15.

414—Giornale di Batteriologia e Immunologia.

a. GAETANI, G. F. DE, 1946.—"Ricerche sierologiche sul liquido perienterico di ascaridi." 34 (2), 65–78. [English, French & German summaries p. 78.]

(414a) Coelomic fluid of *Parascaris equorum*, when repeatedly injected intravenously into five rabbits, provoked in two of them the appearance of antibodies able to fix complement in the presence of either coelomic fluid or aqueous extract of ascaris. The reaction was shown also in the presence of aqueous extracts of various tissues and of blood serum, especially horse serum. The antisera were also haemolytic for horse and ox erythrocytes. E.M.S.

415—Giornale Italiano di Chirurgia.

*a. MAGGIO, P., 1946.—"A proposito di nuovi segni radiologici nella diagnosi dell'echinococco del polmone." 2, 298–307.
*b. MAZZETTI, R., 1946.—"Sulle ascaridiosi chirurgiche." 2, 327–340.

416—Giornale di Medicina. Palermo.

*a. GAGLIANI, A., 1946.—"La capsula avventizia nelle cisti di echinococco del polmone (ricerche istologiche)." 3, 312–315.

417—Guthrie Clinic Bulletin.

*a. BECK, W. C. & McGRATH, J. M., 1946.—"Gastro-intestinal trichinosis as a surgical problem." 16 (2), 45–48.

418—Hahnemannian Monthly. Philadelphia.

a. COOK, H. S., 1946.—"Some interesting animal parasites." 81 (1), 29–39; (2), 62–71; (3), 129 (erratum).

419—Hannoversche Land- und Forstwirtschaftliche Zeitung.

*a. WETZEL, R., 1946.—"Die Blutwürmer (Palisadenwürmer) der Pferde." p. 165.

420—Harefuah.

a. LASS, N., 1946.—"The intracutaneous test with filaria antigen." 30 (6), 144–145. [In Hebrew: English summary p. 145.]

(420a) Lass examined 16 patients showing eosinophilic erythroedema by means of the intradermal test, using an antigen made from *Dirofilaria immitis*. He was, however, unable to apply the results to his diagnoses; four patients failed to react at all, some showed an immediate reaction, some a delayed one and some showed both. P.A.C.

421—Hawaii Medical Journal.

a. PRICE, A. S., 1946.—"Beef tapeworm in Filipinos." 5 (6), 334.

(421a) The racial distribution of 126 cases of *Taenia saginata* infection noted at the Queen's Hospital in Hawaii during 1942 to 1945 is tabulated. 110 cases were in Filipinos, 6 in Caucasians, two each in Japanese, Chinese, Hawaiians and part Hawaiians, and one each in Portugese and Syrian patients. There was only one case of *Taenia solium* infection: it occurred in a Caucasian. R.T.L.

422—Health Bulletin. Melbourne.

a. COLE, G., 1946.—"The Australasian Hydatid Registry." Year 1945, Nos. 83/84, pp. 2255–2261.

(422a) A registry of cases of hydatid disease in Australia and New Zealand, which was instituted in 1930, is now housed at the Royal Australasian College of Surgeons in Melbourne. Up to 31st March 1945, 1,802 cases had been recorded. Of these 931 were in Australia and 871 in New Zealand. Cole remarks that no case records have so far been received from several areas where hydatid disease is known to be prevalent. The 350 cases recorded from Victoria are tabulated under municipalities, age and sex distribution, and sites of cysts. R.T.L.

423—Helvetica Medica Acta. Series A.

a. BÄRTSCHI-ROCHAIX, W. & LA CUADRA, J. DE, 1946.—"Beitrag zur Kenntnis und Diagnostik der spinalen Cysticercose." 13 (2), 192–197. [English, French & Italian summaries pp. 196–197.]

b. DÖRIG, J., 1946.—"Über einen Fall von *Echinococcus cysticus* der Leber mit Einbruch in die Vena hepatica, multiplen Streuschüben unter dem klinischen Bild des eosinophilen Lungeninfiltrates (Löffler) und Tod im allergischen Schock." 13 (6), 625–640. [English, French & Italian summaries p. 640.]

424—Hospital. Rio de Janeiro.

a. LOPES, D. M., 1946.—"A eosinofilia provocada no diagnóstico da esquistosomose." 29 (5), 807–810.

b. OLIVEIRA, H. L. DE & MEIRA, J. A., 1946.—"Sôbre um caso de infecção humana pelo *Clonorchis sinensis*: considerações a respeito da técnica de exame da bile para o diagnóstico dessa parasitose." 30 (4), 559–577. [English summary p. 576.]

(424a) Lopes confirms the observation of Mainzer that the eosinophilic index in doubtful cases of schistosomiasis can be artificially raised by antimony injections. In conjunction with the complement-fixation reaction this is a useful aid to diagnosis. E.M.S.

(424b) Clonorchiasis sinensis in a patient born in China was diagnosed by microscopic examination of bile obtained by duodenal drainage. The technique used is described in detail. Eggs were found in the faeces only after repeated examination. Gentian violet treatment, 0·06 centigrammes *per os* three times daily for one week, was not well tolerated and the dose was reduced to 0·04 centigrammes for a further three weeks. The patient's condition improved, but eggs were still present in the bile at the end of the treatment. E.M.S.

425—Indian Journal of Surgery.

a. REDDY, D. G. & THANGAVELU, M., 1946.—"Hydatid cyst-thyroid." 8 (1), 49–50.

426—Indian Medical Journal.

a. CHAUDHURI, S. P. R., 1946.—"Ascariasis." 40 (11), 260–261.

427—Indian Physician.

a. MEHTA, V. P., 1946.—"A case of elephantiasis treated by primary skin-grafting." 5 (12), 295–296.

428—Indiana Pharmacist.

*a. NILES, E. H., 1946.—"Trichinosis." 28, 90.

429—International Bulletin of Plant Protection. Rome.

a. MILLER, P. R., 1946.—"The potato rot nematode *Ditylenchus destructor*." 20 (11/12), 104.

(429a) Miller briefly sets out the chief facts about the occurrence of *Ditylenchus destructor* on potato tubers in Idaho and its very restricted distribution within that state,

and indicates some of the factors, such as crop rotation and limited host range, which are probably responsible for the failure of the infestation to become very extensive. He also mentions the fact that the same species of eelworm has been reported attacking potato tubers on Prince Edward Island, Canada. T.G.

430—Journal of the American Chemical Society.

a. MAREN, T. H., 1946.—" Preparation of a filaricide. *p*-[Bis-(carboxomethylmercapto)-arsino]-benzamide." 68 (9), 1864–1865.

(430a) The preparation is described of a compound [now designated arsenamide] having the desired solubility yet retaining the therapeutic activity of its parent compound (*p*-arsenosobenzamide) which was found to be the most favourable of 20 phenyl arsenoxides tested against *Dirofilaria immitis* and *Litomosoides carinii*. J.J.C.B.

431—Journal of the American Medical Association.

a. GUYTON, W. L., 1946.—" Poisoning due to oil of chenopodium." 132 (6), 330–331.
b. CAWSTON, F. G., 1946.—" Schistosomes and impaired sight." [Correspondence.] 132 (6), 349.

(431b) Cawston reports that the late Dr. G. J. Lindsay had observed schistosome cercariae in the human eye. He thinks that where cercariae are in the blood stream in large numbers some may find their way into the lens, and this may explain the improvement that sometimes occurs in the sight of patients treated with antimony. R.T.L.

432—Journal of the American Medical Women's Association.

*a. HOWELL, K. M. & KNOLL, E. W., 1946.—" Multiple intestinal parasitic infections." 1 (7), 203–206.

433—Journal of the American Veterinary Medical Association.

a. KAPLAN, M. M., 1946.—" The veterinary status of Greece and UNRRA aid in 1945." 109 (832), 25–34.

(433a) In Greece approximately 30% of the livers of large and small ruminants slaughtered in the abattoirs contain liver-flukes. *Dicrocoelium dendriticum* proved resistant to carbon tetrachloride. Enormous losses in edible meat are caused by echinococcus cysts in the livers and lungs of sheep, goats and cattle. 50% of the cattle and 80% of the sheep and goats are affected. Human cases are common. Severe losses and unthriftiness due to trichostrongyles are prevalent in sheep and goats. R.T.L.

434—Journal of Animal Science.

a. EMIK, L. O., 1946.—" The nature of genetic resistance of sheep to trichostrongylid worms." [Abstract of paper presented at the 38th Annual Meeting of the American Society of Animal Production.] 5 (4), 413–414.
b. WINCHESTER, B. & HERRICK, C. A., 1946.—" Some effects of administering copper sulphate, copper-nicotine, and phenothiazine with and without cobalt supplement." [Abstract of paper presented at the 38th Annual Meeting of the American Society of Animal Production.] 5 (4), 417.

(434a) In sheep there is a genetical resistance to trichostrongylids, largely due to inherent differences among individuals. The present studies, admittedly not conclusive, point to a causal relation between this resistance and the lymph nodes. R.T.L.

(434b) A study of parasitism in relation to mineral deficiency was made on the flocks of two Shawano County farms where the conditions were similar and the losses of lambs severe. With the clinical parasitism the haemoglobin was very low. A standard ration was used on both farms and on one, cobalt chloride was given in salt. On both farms all ewes and lambs after being marked and weighed were randomized in 4 treatment groups : (i) given copper sulphate, (ii) given copper and nicotine sulphates, (iii) given phenothiazine drench,

and (iv) used as controls. Identical treatments affected the two flocks quite diversely. In the flock not given cobalt none of the drenches was of any value, while in the other, where cobalt and salt were given, the lambs in all the treatment groups were superior in weight, grade and rate of gain to those treated without cobalt, and to the controls in the cobalt group. R.T.L.

435—Journal of the British Grassland Society.

a. SHANKS, P. L., 1946.—"Diseases associated with grass and grassland management." 1 (2), 134–141.

(435a) Among the diseases associated with grassland in Britain those due to internal parasites are probably responsible for more monetary loss than any other single disease. Preventative measures are cited from the "Reports on Diseases of Farm Livestock", Sections II and III, issued by the National Veterinary Medical Association in 1944 and 1945 respectively. R.T.L.

436—Journal of the Department of Agriculture. South Australia.

a. JOHNSTON, T. H., 1946.—"The transmitting agent of the sheep liver fluke in South Australia." 50 (4), 194–197.

(436a) *Fasciola hepatica* is uncommon in sheep in South Australia but is known to be present along the River Murray swamps. In New South Wales the vector is *Limnaea brazieri* but this snail does not occur in South Australia. Johnston now shows that in this State the vector is *L. subaquatilis* which has a sporadic distribution. The spring and early summer months are those in which marked infection occurs, and cercariae begin to emerge late in November or in December and continue until late autumn. Heavy infection results in death of the snails. In South Australia the pronounced seasonal rainfall, which is chiefly during the winter months, and the hot dry summer play an important role in controlling fluke infestation. R.T.L.

437—Journal of the Egyptian Public Health Association.

a. HALAWANI, A., 1946.—"Intensive treatment of schistosomiasis with trivalent antimony compounds." 21 (9), 219–226.

(437a) Halawani and his colleagues have used repodral [=fouadin] in the intensive treatment of schistosomiasis haematobia. Fifteen patients free from cardiac, hepatic or renal dysfunctions received 0·5 c.c. per kg. body-weight of a 6·3% solution (i.e. 30 c.c. for an adult weighing 60 kg.) in six injections of 5 c.c. each in two days; 11 (73·2%) were cured and toxic manifestations were less severe than have been reported with tartar emetic. A modified form of intensive treatment was used in a further series of cases; an adult weighing 60 kg. received daily intramuscular injections of a 6·3% repodral solution, the amounts being 1·5 c.c. the first day, 3·5 c.c. the second day, and 5 c.c. daily thereafter. Of 103 patients who completed 10 injections each, 87 (84·5%) were apparently cured. Toxic symptoms were generally slight, but severe indurations and urticarial wheals appeared at the site of injection in one patient. In both groups of patients some cures became manifest a week or more after cessation of treatment. E.M.S.

438—Journal of Experimental Biology.

a. SMYTH, J. D., 1946.—"Studies on tapeworm physiology. I. The cultivation of *Schistocephalus solidus* in vitro." 23 (1), 47–70.

(438a) Plerocercoid larvae of *Schistocephalus solidus* were removed aseptically from the body-cavity of *Gasterosteus aculeatus* and cultured at 16° to 19°C. in a variety of balanced salines, glucose salines and nutrient peptone broth. The larvae remained active and normal for periods up to 300 days in the peptone broth, for 114 days in ¾-strength Locke's solution and for considerably lower periods in other saline and saline-glucose media. At room

temperatures the genitalia remained immature but at 40°C. in peptone broth the larvae developed into sexually mature adults which remained viable for four to six days ; oviposition took place at 48 to 60 hours. Cross-fertilization between segments of the same worm or with segments of another worm was not observed and attempts to hatch out the eggs produced proved unsuccessful. J.J.C.B.

439—Journal of Helminthology.

a. BUCKLEY, J. J. C., 1946.—"A helminthological survey in Northern Rhodesia." **21** (4), 111–174.
b. GOODEY, T., 1946.—"*Domorganus macronephriticus* n.g., n.sp., a new cylindrolaimid free-living soil nematode." **21** (4), 175–180.

(439a) In the Chambezi-Luapula area of the Northern Province of Northern Rhodesia, 2,575 Africans were examined for intestinal helminths and 2,617 for urinary helminths. The examinations were carried out in the native villages in widespread localities representative of different topographical parts of the area. The average infection rates were as follows : hookworm, 52·2% ; *Strongyloides*, 13·3% ; *Ascaris lumbricoides*, 3·7% ; *Enterobius vermicularis*, 0·85% ; *Trichuris trichiura*, 0·3% ; *Trichostrongylus* sp., 0·1% ; *Schistosoma haematobium*, 14·7% ; *S. mansoni*, 6·99% ; *Hymenolepis nana*, 0·08% ; *H. diminuta*, 0·04% ; *Taenia* sp., 0·04%. The survey revealed regions or foci of relatively high and relatively low incidence in the case of each of the major species. The relationship of these to topographical and other factors is discussed. Examination of 459 Africans for *Microfilaria bancrofti* revealed three positives but none of these had definitely contracted the infection in Northern Rhodesia. *Mf. perstans* was found in 5·4% of those examined and is endemic in the country. J.J.C.B.

(439b) Goodey gives an illustrated description of *Demorganus macronephriticus* n.g., n.sp., a free-living nematode obtained from pasture soil at Winches Farm, St. Albans, which is closely akin to the genus *Cylindrolaimus*. A remarkable feature of the new genus is the possession by males and females of a large excretory gland, the duct from which opens at the excretory pore. T.G.

440—Journal of the Indian Medical Association.

a. SHASTRY, T. S., 1946.—"Guineaworm." **15** (11), 362–364.
b. DEBSARMA, D. N., 1946.—"Intestinal helminthiasis." **16** (1), 6–7, 11.
c. JHATAKIA, K. U. & MANKAD, K. K., 1946.—"Incidence of intestinal protozoa and parasites in routine stool examinations." **16** (2), 44–47.

(440a) Intravenous injections of 1 c.c. of 2% aqueous solution of sodium antimony tartrate proved a reliable, simple and prompt cure for guinea-worm when three injections are given on alternate days. There is relief in 24 hours and usually complete cure in 7 days. Shastry has found the worm in a hernial sac, under the scalp, in the groin, behind the knee-joint, in the muscles of the trunk and thigh, and in the perinephric region. R.T.L.

(440c) The results of routine stool examination of 856 middle-class patients, mainly adults, in Bombay are tabulated. The following helminth infections occurred : *Hymenolepis nana* 12, *Ascaris lumbricoides* 48, *Trichuris trichiura* 20, hookworm 36, *Strongyloides stercoralis* and *Enterobius vermicularis* one each. R.T.L.

441—Journal of Infectious Diseases.

a. OLIVER-GONZÁLEZ, J., 1946.—"Immunological relationships among polysaccharides from various infectious organisms." **79** (3), 221–225.

(441a) An examination of various helminth polysaccharides shows that there is a close immunological relationship between those of *Ascaris lumbricoides, Trichinella spiralis, Fasciola hepatica* and *Taenia saginata*, but that of *Macracanthorhynchus hirudinaceus*

is distinct. More than one antigen seems to be present in these fractions and Oliver-González suggests that an isoagglutinin is responsible for the cross-reactivity between the four species. When this isoagglutinin is checked the precipitins are still present and will react. P.A.C

442—Journal of Laboratory and Clinical Medicine.

a. BAROODY, B. J. & MOST, H., 1946.—" The relative efficiency of water centrifugal sedimentation and other methods of stool examination for diagnosis of schistosomiasis japonica." **31** (7), 815–823.

b. BAROODY, B. J., 1946.—" Modification of the Faust method in the detection of cysts and ova." **31** (12), 1372–1374.

(442a) The relative efficiency of various techniques used for the examination of 25,000 stools for eggs of *Schistosoma japonicum* is discussed. The authors found that by a modification of Faust & Meleney's water-centrifugal sedimentation, 47 positive results were obtained in a group of 50 patients. The remaining three were detected by direct smear of blood-streaked mucus. R.T.L.

(442b) Faust's concentration method has been modified by the use of (i) a large 50 c.c. tube, (ii) a much larger sample of faeces, and (iii) the use of warm water (40°C.) to eliminate a high percentage of the scum or fats. In this way the yield of eggs and Strongyloides larvae is increased and the method is of particular value when these are scanty. R.T.L.

443—Journal of Mammalogy.

a. LLEWELLYN, L. M. & HANDLEY, C. O., 1946.—" The cottontail rabbits of Virginia." **26** (4), 379–390.

(443a) Practically all of 75 cottontails (*Sylvilagus floridanus*) examined were found to be infested with *Cysticercus pisiformis* ; the liver often showed scars due to these parasites. *Dirofilaria scapiceps* occurred in about 2%, usually coiled in the intramuscular fasciae of the hind leg. One specimen contained *Obeliscoides cuniculi*, *Hasstilesia tricolor*, a *Cittotaenia* sp., *Trichuris leporis*, and *Dermatoxys veligera*. R.T.L.

444—Journal of the Michigan State Medical Society.

a. DALE, M., 1946.—" Imported tropical disease—a community problem." **45** (8), 1057–1063.

445—Journal of Nervous and Mental Disease.

a. CUTLER, J. G., 1946.—" Schistosomiasis of the central nervous system." **104** (4), 425–431.

(445a) The cases of invasion of the central nervous system by schistosomes recorded in the literature are reviewed and a new case of probable schistosomiasis japonica of the brain is reported. The importance of early treatment is emphasized. R.T.L.

446—Journal of Neurosurgery. Springfield, Ill.

a. SWANSON, H. S., 1946.—" Cerebral granuloma due to schistosomiasis japonica. A case report." **3** (6), 538–542.

447—Journal of the New York Botanical Garden.

a. DODGE, B. O., 1946.—" Lesion nematodes on roots of Japanese iris." **47** (562), 246–248.

(447a) Dodge reports on a sickness of Japanese irises which has puzzled plant pathologists for many years in the U.S.A. The leaves turn brown prematurely in the summer, the roots become matted and show numerous lesions, and the plants gradually die.

Examination of the roots of plants from three different gardens was made by Steiner who found numerous lesion nematodes [*Pratylenchus pratensis*] in them and it is now thought that such parasitic nematodes may be the cause of the trouble. T.G.

448—Journal of Pathology and Bacteriology.

a. LI, P. L., 1946.—" A histopathological study of small lungworm infection in sheep and goats with special reference to muscular hypertrophy of the lung." 58 (3), 373–379.
b. DE SARAM, G. S. W. & PIERIS, M. V. P., 1946.—" Filarial epitrochlear gland." 58 (3), 586.

(448a) A *Protostrongylus* sp. is very common in sheep and goats in north-west China. Heavy infections give rise to no clinical symptoms but predispose the pulmonary tissue to secondary bacterial invasion. The worms cause raised greyish nodules and cone-shaped areas of consolidation of 1–2 cm. diameter beneath the pleura. These were absent from the interior of the lung. The morbid histology is described. The infection causes hypertrophy of the muscle bundles in the bronchiolar ductules and bronchioles causing obstruction. Collapse of the lung tissue may result in the so-called muscular cirrhosis of the lung, and with this is usually associated a compensatory emphysema. R.T.L.

(448b) An enlarged right epitrochlear gland excised in Ceylon from a girl 14 years of age showed marked follicular and reticulo-endothelial hyperplasia with much eosinophilic infiltration. There was some fibrosis surrounding dilated lymphatics which contained sections of adult filarial worms which could not be identified. There was no haemic eosinophilia, and microfilariae were absent from the peripheral blood. R.T.L.

449—Journal of the Philippine Medical Association.

a. SISON, A. B. M. & ROSALES, R., 1946.—" Symptomatology of severe Ascaris infestation." 22 (1), 7–10.
b. LARA, H., GAN, T. M., MATIAS, M. Y. & REYES, A. C., 1946.—" *Digenia simplex* as a substitute in the treatment of ascariasis." 22 (6), 239–242.
c. GUTIERREZ, P. D., LOZANO, A. A. & PESIGAN, T. P., 1946.—" Report of the first case of intestinal heterophyidiasis diagnosed in life in the Philippines." 22 (7), 287–292.
d. GUZMAN, F. & MORALES, P., 1946.—" Ascaris in the common bile duct (a report of 10 cases)." 22 (7), 299–303.
e. MOLINA, R. D. & SANTOS, H. A., 1946.—" Tetrachlorethylene treatment of ankylostomiasis." 22 (9), 385–387.
f. PESIGAN, T. P., REYES, Jr., F. A. & YOGORE, Jr., M. G., 1946.—" Some newer knowledge in parasitology : a review." 22 (9), 389–404.

(449b) Because of the wartime shortage of imported drugs, Lara and his colleagues used a concentrated decoction of a locally abundant seaweed, *Digenea simplex*, as an ascaricide. The decoction was given in doses of 15 c.c. to small children, or 20 c.c. to those seven years of age or over, these doses containing the extract of 15 and 20 gm. of seaweed, respectively. Prolonged boiling, up to four hours, increased the effectiveness of the decoction. No ill-effects were observed and no preparation of the patient was necessary. The efficacy was 73·61% in a series of 163 patients. E.M.S.

(449c) During hospital examination of a patient with *Schistosoma japonicum*, heterophyid eggs were found in the stool together with Trichuris, Ascaris and hookworm eggs. At autopsy five specimens of " what appeared to be *Haplorchis yokogawai* " were recovered from intestinal scrapings. The parasite had not contributed to the death of the patient. It is the first recorded infection in a Filipino who had never left his own country. E.M.S.

(449e) Practically no untoward effects were noted in 32 patients treated with tetrachlorethylene for ancylostomiasis ; 29 were cured. Of these 65% received only a single treatment of three to four capsules, each containing 16 minims of tetrachlorethylene and immediately followed by 15 to 30 gm. of magnesium sulphate or a dose of liquor magnesii citratis. No dietetic precautions were taken before or after treatment. Dizziness was observed in 6% only of the cases treated. R.T.L.

450—Journal de Radiologie et d'Électrologie.

a. ROUCAYROL, 1946.—" Traitement du taenia par la d'Arsonvalisation." 27 (5/6), 228.
b. MARQUÈS, P., BRU & DOASSANS, 1946.—" Un cas d'échinococcose pulmonaire polykystique traité par radiothérapie." 27 (9/10), 467–468.

(450a) A patient with Taenia expelled his worm complete with scolex, following a fourth rectal diathermy treatment for prostatitis. The same chance result has been observed in eight subsequent diathermy patients after 4–6 treatments. The method was used in an elderly woman in whom anthelmintic treatment was contra-indicated : she passed the scolex after the ninth treatment. E.M.S.

451—Journal of the Royal Faculty of Medicine of Iraq.

*a. DAHAN, S., 1946.—" Hydatid cyst of the kidney evacuated spontaneously through the bowel." 10 (1/2), 39.

452—Journal of the University of Bombay. Section A, Physical Sciences.

a. BHATT, B. L., PATEL, N. Z. & NARGUND, K. S., 1946.—" Synthetical anthelmintics. Part XI. γ-4-alkoxy-3-tolyl butyrolactones." [Bhatt & Nargund.] " Part XII. γ-4-alkoxy-2-tolyl butyrolactones. Part XIII. γ-2-alkoxy-5-tolyl butyrolactones." [Patel & Nargund.] 15A (3), 31–41.

453—Journal-Lancet.

*a. HUDSON, E. H., 1946.—" Filariasis and malaria on the campus." 66 (6), 191–192.

454—Klinische Wochenschrift.

a. STICH, W., 1946.—" Stercobilinurie bei Bothriocephalus-Perniciosa." 24-25 (11 12), 177–179.

455—Kungl. Fysiografiska Sällskapets i Lund Förhandlingar.

a. ALLGÉN, C. A., 1946.—" Kleinere Notizen über freilebende Nematoden." 16 (15), 131–143.

(455a) *Mononchus dolichurus* is recorded as new for Swedish fresh waters. The male of *Sabatieria australis* is described from Discovery Bay, Antartica. *Desmoscolex campbelli* n.sp., is described from Campbell Island. The terrestrial nematode *Plectus granulosus* is recorded and described from the littoral region of north-west Skåne, in the roots of *Zostera* driven onto the Torekov coast. E.M.S.

456—Lanares y Lanas.

*a. CALDERÓN LYNCH, A., 1946.—" Estudio de la tenia *Thysanosoma actinioides*, difundida en la Puna del Sur del Perú." 2 (3), 19–22, 39.
*b. MACEDO, L. P., 1946.—" La strongylosis gastro-intestinal y pulmonar en los lanares." 2 (4), 15–17.

457—Lancet.

a. ALVES, W. & BLAIR, D. M., 1946.—" Diagnosis of schistosomiasis. Intradermal test using a cercarial antigen." Year 1946, 2 (6425), 556–560.

(457a) Schistosomiasis is found practically everywhere in Southern Rhodesia, but diagnosis must precede mass treatment as its intensity varies from place to place. The difficulties of diagnosis are summarized. As there are various unsatisfactory features in the use of molluscan livers as antigen, a cercarial antigen was prepared by which a higher proportion of cases of schistosomiasis was diagnosed than by microscopical examination of the excreta. The test can be used as a rapid and accurate screen in mass treatment campaigns and the efficacy of treatment can be measured accurately. R.T.L.

458—Landbouwkundig Tijdschrift.

a. KOOT, Y. VAN, 1946.—"De ziekten van de tomaat." 58 (703), 627–630.

(458a) In a general account of tomato diseases Van Koot gives a short paragraph on root-knot disease caused by *Heterodera marioni*, which is of some importance in glasshouses in western Holland. He states that the only practical means of keeping the trouble in check is by steam sterilization or by soil fumigation with carbon disulphide. M.T.F.

459—Laval Médical.

a. LANGLOIS, M., 1946.—"Les vers intestinaux chez l'enfant." 11 (4), 444–455. [Discussion p. 456.]

460—Leaflet. Agricultural Extension Service, Department of Agriculture, Province of Alberta.

a. ANON., 1946.—"Internal parasites of poultry." No. 30, 4 pp.

461—Leaflet. United States Department of Agriculture.

a. RANSOM, B. H., HALL, M. C. & RAFFENSPERGER, H. B., 1946.—"The prevention of roundworms in pigs." No. 5, 8 pp. [Revised.]
b. SCHWARTZ, B., 1946.—"Trichinosis. A disease caused by eating raw pork." No. 34, 8 pp. [Revised.]

462—Liverpool Medico-Chirurgical Journal.

a. WARD, R. O., 1946.—"The surgery of urinary bilharziasis." 50 (1), 29–34.

463—M.S.C. Veterinarian. Michigan State College.

a. BREWER, N. R., 1946.—"Will the dog point the way to combatting human filariasis?" 6 (1/2), 24, 35.
b. BRINKER, W. O. & PLATT, J., 1946.—"Some observations on the efficiency of Di-Phenthane-70 in canine teniasis." 6 (3/4), 57, 86.

(463b) The taeniacidal action of di-phenthane-70 (teniathane) in dogs, reported by Craige & Kleckner in 1946 [see Helm. Abs., Vol. XV, No. 45a], is confirmed. It is well tolerated and non-toxic in dosages of 8 grains per 6 lb. body-weight. Of almost 300 cases treated only a small number required re-treatment. Vomiting occurred in less than 2%. The commonest reaction was a copious bowel movement in 4 to 8 hours. The worms are not evacuated; they are disintegrated in the intestine. R.T.L.

464—Manitoba Medical Review.

a. PEIKOFF, S. S. & ANGELLE, E. P., 1946.—"Hydatid disease." 26 (12), 670–676.

(464a) Hydatid is a rare disease of man in the American continent. It is pointed out that of the 500 cases reported since 1811 all but 29 had probably contracted the infection prior to their arrival in America. Of 35 cases recorded from the General Hospital, Winnipeg, since 1923 the majority were Icelanders. The only case seen by the authors during 20 years of practice is described: this patient, aged 51, was born in Austria and came to Canada when six years old. The history of the case was probably of 30 years' duration. R.T.L.

465—Maroc Médical.

*a. CHENEBAULT, 1946.—"Symphyse pleurale artificielle pré-opératoire dans le traitement chirurgical des kystes hydatiques intra-thoraciques." 25 (258), 24.

466—Medical Parasitology and Parasitic Diseases.

a. MOSHKOVSKI, S. D., 1946.—[Functional parasitology. Second essay.] 15 (5) 28–42. [In Russian.]

b. HELLER, E. R., 1946.—[Analysis of population of *Enterobius vermicularis* in various portions of the host's intestine and auto-invasion in oxyuriasis.] 15 (5), 45–52. [In Russian.]
c. MOSHKOVSKI, S. D., 1946.—[Functional parasitology. Third essay.] 15 (6), 3–19. [In Russian.]

(466b) Heller has carried out extensive observations on *Enterobius vermicularis* and *Passalurus ambiguus* to find out whether internal auto-infection takes place. He attempted to establish this point by studying the stage of development of the ova in gravid females in different parts of the intestine of the host. His main conclusions are : (i) gravid oxyurids actively leaving the rectum must contain ova in the gastrula stage in the case of *P. ambiguus* and in the tadpole stage in the case of *E. vermicularis* before they can become infective ; (ii) oxyurids passively leaving the host in faeces contain ova which are unable to develop further ; (iii) oxyurids obtained by enemas contain ova unsegmented or at a very early stage of segmentation ; (iv) the study of oxyurid populations post mortem showed that the majority of sexually mature forms, both male and female, were found in the upper part of the large intestine : fertilization takes place here and the worms remain here until the ova have reached the first stage of development inside the gonads ; (v) segmentation of ova was observed in the lower part of the large intestine and those ova which were at the stage capable of development outside the host were found in the preanal region of the rectum ; (vi) the results obtained seemed to show that in oxyurids, internal auto-infection is impossible : ova accidentally laid in different parts of the large intestine do not develop and cannot reach the infective stage. The author examined 274 appendices of which 59 (21·5%) were infested with *E. vermicularis*. C.R.

467—Medical Press and Circular.

a. OAKLEY, A. R. H., 1946.—" A case of cysticercosis calcificans : an investigation and discussion." 215 (17), 272–277.
b. CAWSTON, F. G., 1946.—" Some risks from new remedies in tropical disease." 215 (22), 361–362.

(467a) Oakley reports a case, discovered accidentally by X-ray examination, of cysticerciasis in a Pole. The diagnosis was only made on his fifth admission to a hospital ; although the signs and symptoms were typical and the cysts were palpable the condition had been overlooked owing to an absence of " awareness " of the disease on the part of the physician. R.T.L.

(467b) Cawston comments on the risk involved in permitting nurses and native assistants to undertake the treatment of schistosomiasis. He has used anthiomaline intravenously as it is less toxic than unfiltered solution of tartar emetic, which is still considered a safe and economical remedy if judiciously applied even by careful and skilled native assistants. The spine of the schistosome egg is, in his opinion, probably " associated with the necessary attachment of escaping ova to faeces and vegetation harbouring snails". R.T.L.

468—Medical World. London.

a. HUTCHISON, J. H., 1946.—" Tropical and subtropical diseases in discharged service men." [Cysticerciasis.] 63 (21), 649–654.

469—Medicina. Madrid.

*a. GARCÍA BENGOCHEA, J. B. & PINTOS PÉREZ, J., 1946.—" Voluminoso quiste hidatídico mediastino pulmonar." 14 (2), 350–354.

470—Medicina Clínica. Barcelona.

a. NAVLET RODRÍGUEZ, J., 1946.—" Contribución al estudio de la endemia de equinococosis en España." 7, 210–212. [English, French & German summaries p. 212.]

(470a) Hydatid disease constitutes 0·66% of the adult morbidity in Spain, pulmonary cysts being present in 2·7% of all cases. E.M.S.

471—Medicina Colonial. Madrid.

a. BOSCH MILLARES. J., 1946.—"La ascaridiosis en Canarias." 8 (3), 181–213.
b. GONZÁLEZ CASTRO, J., 1946.—"Distomatosis pulmonar." 8 (4), 253–275.
c. MATILLA, V., COVALEDA, J. & APARICIO GARRIDO, J., 1946.—"El parasitismo intestinal por vermes entre la población indígena de Fernando Poo." 8 (6), 415–422.

(471c) Of 103 persons examined in Santa Isabel, Fernando Pó, 96 (93·2%) carried helminth infestations, although no clinical symptoms were evident. *Ancylostoma duodenale* was present in 80·5%, *Ascaris lumbricoides* in 51·4%, *Necator americanus* in 8·7%, *Trichuris trichiura* in 12·6% and *Diphyllobothrium latum* in 0·97%. Half the subjects carried two or more species. E.M.S.

472—Medicina del Deporte y del Trabajo. Buenos Aires.

*a. JORGE, J. M. & FERRO, A., 1946.—"Hidatidosis enfermedad invalidante debe figurar entre las enfermedades profesionales." 10, 256–262, 312.

473—Medicina. Revista Mexicana.

a. SANTOS ZETINA, F., 1946.—"El vital problema sanitario de la Zona Henequenera." 26 (513), 336–339.

(473a) There were 72,072 cases of intestinal parasitism recorded during the years 1940–45 inclusive in the Departamento de Asistencia Social de Henequeneros de Yucatan, including the following helminthiases: *Taenia saginata* 21, *T. solium* 12, *Hymenolepis diminuta* 1, *H. nana* 124, hookworm 33, Trichuris 3,257, Ascaris 2,372, Enterobius (faecal examination only) 76, Strongyloides 37. E.M.S.

474—Medycyna Weterynaryjna.

a. MALINGIEWICZ, C., 1946.—"Dwa przypadki anomalii tasiemców." 2 (1), 15. [In Polish.]
b. ŻARNOWSKI, E., 1946.—"Przyczynek do zwalczania robaczycy jelitowej koni spowodowanej przez nicienie z rodziny Strongylidae i glisty—*Parascaris equorum*." 2 (3), 85–88. [In Polish: French summary pp. 87–88.]
c. DONIGIEWICZ, K., 1946.—"Inwazyjne schorzenia oczu u bydła rogatego." 2 (3), 92–94. [In Polish.]
d. SZAFLARSKI, J., 1946.—"Kombinowane zakażenie świni włośniami wągrami oraz bąblowcami." 2 (3), 104. [In Polish.]
e. SZAFLARSKI, J., 1946.—"Przyczynek do serologicznego rozpoznawania motylicy owczej." 2 (5), 217–219. [In Polish: French summary p. 219.]
f. PUSTÓWKA, T., 1946.—"Szybkość opadania krwinek u bydła przy motylicy." 2 (8), 341–348. [In Polish: French summary p. 348.]
g. SZAFLARSKI, J., 1946.—"Przypadek zatrucia czterochlorkiem węgla (CCl_4) u koni." 2 (11), 526–527. [In Polish.]
h. ŻARNOWSKI, E., 1946.—"Uwagi na temat stosowania czterochlorku węgla." 2 (11), 527 [In Polish.]

(474a) Malingiewicz notes abnormalities in the structure of *Dipylidium caninum* and *Anoplocephala magna*. C.R.

(474b) Zarnowski obtained good results when treating horses infested with strongyles and *Parascaris equorum* by administering by stomach tube a mixture of 10 to 15 c.c. carbon disulphide, 20 to 25 c.c. carbon tetrachloride and 30 to 40 c.c. liquid paraffin per 300–400 kg. body-weight. C.R.

(474c) Donigiewicz describes the occurrence in Dolina district of *Thelazia rhodesii* in the eyes of 319 head of cattle. In 215 of the animals the worms were found in the left eye, in 89 in the right eye and in 15 in both eyes. C.R.

(474d) Szaflarski notes an infestation in a pig of *Cysticercus cellulosae*, hydatid and *Trichinella spiralis*. C.R.

(474e) According to Szaflarski the serum precipitation test is specific in sheep infested with *Fasciola hepatica*. The best results were obtained when the antigen was diluted 1 : 500 and 1 : 1,000. C.R.

(474f) Pustówka carried out erythrocyte sedimentation tests (R.S.) on cattle infested with *Fasciola hepatica*. According to him the difference in R.S. between cattle free from liver-fluke and those infested is marked after 30 minutes, but is greatest after 24 hours. Six tables and five graphs provide details of the investigations. C.R.

(474g) Szaflarski records the death of three horses after anthelmintic treatment with a mixture of carbon tetrachloride and rape oil. C.R.

(474h) Żarnowski discusses the deaths recorded by Szaflarski [see preceding abstract] and stresses the importance of avoiding the use of any fats for the dilution of carbon tetrachloride. C.R.

475—Mémoires du Muséum National d'Histoire Naturelle. Paris.

a. DOLLFUS, R. P., 1946.—"Notes diverses sur des tétrarhynques." 22 (5), 179–220.

(475a) Dollfus creates two new genera of Eutetrarhynchidae, *Parachristianella* n.g. for *P. trygonis* n.sp. with heteromorphic metabasal armature and no basal swelling, and *Prochristianella* n.g. for two species, *P. trygonicola* n.sp. with heteromorphic metabasal armature (the genotype), and "*Rhynchobothrium tenuispine*" Linton with perhaps a homeomorphic metabasal armature, both species having a metabasal swelling armed with identical and characteristic hooks. The two new species were collected from *Trygon pastinaca*, in which specimens were also found which are described as *Grillotia* (*Progrillotia*) *pastinacae* n. subg., n.sp. The generic name *Cotylogenes* Lühe is suppressed as applying to a tetraphyllid scolex and a tetrarhynchid proglottis, probably a *Lacistorhynchus* sp. E.M.S.

476—Memoirs of the Faculty of Agriculture, National Taiwan University.

a. MATSUMOTO, T., 1946.—"Tobacco diseases in Formosa." 1 (1), 26 pp.

(476a) *Heterodera marioni* occurs very commonly in sandy soils all over the island of Formosa, not infrequently causing serious damage to tobacco crops, especially in the hot, dry, central or southern parts of the island. E.M.S.

477—Memorias do Instituto Butantan.

a. LEÃO, A. T., 1946.—"Sôbre um novo gênero de Liophistrematinae Artigas, Ruiz & Leão, 1942 (Trematoda, Plagiorchiidae)." 19, 33–40. [English summary p. 37.]
b. EICHBAUM, F. W., 1946.—"Biological properties of anacardic acid (*o*-pentadecadienyl-salicylic acid) and related compounds. Part IV. The vermicidal, antiprotozoic, antiectoparasitic and larvicidal action of anacardates." 19, 119–126. [In English : Portuguese summary pp. 125–126.]
c. RUIZ, J. M., 1946.—"Pronocephalidae (Trematoda). Estudos das espécies brasileiras e revisão da família." 19, 249–372.

(477a) Leão describes *Bieria artigasi* n.g., n.sp., a trematode parasite of the lungs of *Liophis miliaria* in São Paulo. It is a large species with the cirrus sac lying in front of the acetabulum. The ovary is spherical and lies in front of the testes which also have a smooth outline. The excretory system is large. The genus is allied to *Liophistrema* but can be distinguished by the position of the genital pore, cirrus sac and vagina. P.A.C.

(477b) The vermicidal action of cashew nut oil in the form of an alcoholic tincture has long been known in popular medicine. Eichbaum finds that 90% of the crude cashew nutshell liquid is anacardic acid containing an unsaturated alkyl radical with 15 carbon atoms linked to a salicylic acid radical. Rabbits and guinea-pigs which had received 10 to 20 c.c. of a 1% solution of sodium anacardate by the mouth were observed to expel large

numbers of dead worms for one or two days. *In vitro* experiments showed that while "*Rhabditis* Fülleborn" [? *Rhabdias fülleborni*] from the lungs of frogs was highly sensitive, cestodes from rats were only moderately so, and pig ascarids were very resistant. *In vivo* experiments are in progress. R.T.L.

(477c) In reviewing the family Pronocephalidae, Ruiz recognizes seven subfamilies. The Brazilian forms fall into 28 genera organized in seven subfamilies. These are reviewed individually in the second part of this article together with each local species. Among the Pronocephalinae he places *Pronocephalus minutus* n.sp., a parasite of the intestine of a marine tortoise in São Paulo : it can be recognized by the structure of the head collar and the general arrangement of the genitalia. P.A.C.

478—Memorias do Instituto Oswaldo Cruz.

a. LENT, H., FREITAS, J. F. TEIXEIRA DE & PROENÇA, M. C., 1946.—" Alguns helmintos de batráquios colecionados no Paraguai." **44** (1), 195–214.
b. JANSEN, G., 1946.—" Profilaxia experimental da esquistosomose de Manson." **44** (3), 549–578.

(478a) Ten species of helminths are recorded from four out of 20 different species of batrachians in Paraguay. Of these *Physaloptera venancioi* n.sp. from *Bufo paracnemis* is figured and described as new. It differs from *P. amphibia* chiefly in the caudal papillae and size of the eggs. R.T.L.

(478b) At Pernambuco, in the municipality of Catende, the rate of infection with *Schistosoma mansoni* is 53%. The incidence by age and sex is tabulated. *Tropicorbis centimetralis* is the local vector. The results of treatment with tartar emetic, Stibetina, Antimonyl (intramuscularly and intravenously) and Stibin (intramuscularly) are compared. 68·4% of 1,990 cases treated were cured. The sanitary measures introduced are described and illustrated. Calcium hydroxide, as recommended by Luttermoser, was used against the molluscan vector. The rate of infection of *T. centimetralis* collected in various localities is tabulated, that at Açude Desertor being exceptionally high at 18·45%. R.T.L.

479—Mimeograph Paper. Georgia Coastal Plain Experiment Station.

a. ANON., 1946.—" Sodium fluoride for the removal of large roundworms from swine." No. 46, 1 p.

(479a) Pigs at the Georgia Coastal Plain Experiment Station were treated with sodium fluoride, which was thoroughly mixed with ground maize to the extent of 1%. They were treated when 6 weeks old and again at 13 weeks. If treated after weaning one treatment might suffice. Treatment given more often than once in 6 to 12 weeks tended to poison the animals. R.T.L.

480—Minnesota Medicine.

a. BACKUS, R. W., 1946.—" Tropical disease hazards in the Northwest." **29**, 227–234.

481—Mississippi Doctor.

a. CRENSHAW, J. F., 1946.—" Schistosomiasis japonicum—a case report." **24** (6), 153–155.

482—Mississippi Farm Research.

*a. SCALES, J. W., 1946.—" Suggestions for control of parasites in horses." **9** (2), 1, 6.
*b. WARD, J. W. & SCALES, J. W., 1946.—" Studies made of lead arsenate for sheep tapeworm." **9** (2), 6.
*c. SCALES, J. W., 1946.—" Lungworm disease of cattle." **9** (8), 7.
*d. SCALES, J. W., 1946.—" Sodium fluoride treatment for swine roundworms." **9** (11), 8.

483—Mitteilungen für West- und Nordwestdeutschland. Amtliches Organ des Kartells Westdeutscher Rennvereine.

a. WETZEL, R., 1946.—"Wurmbekämpfung erhöht die Leistung und hilft Futter sparen." 2 (20), 171–173.

(483a) The long-term harm from latent infections of horses with strongyles and ascarids far exceeds the immediate losses. Apart from therapeutic measures in clinical cases, breeding establishments should practise thorough prophylactic deworming in spring before the animals are put on pasture and in autumn when they return to the stables. Pregnant mares should be dosed 4 to 6 weeks before parturition. Foals should be treated when weaned (at 3 to 5 months), again at 7 to 9 months, and before being put out to pasture (at 12 to 15 months), and thereafter twice annually. Further prophylactic measures include collection of faeces, mixed grazing with cattle and sheep, rotational grazing of small enclosures, long periods of pasture rest, the mowing and immediate removal of grass after dew, the making of hay and the ploughing-up of pasture land. R.T.L.

484—Mosquito News.

*a. HOPLA, C. H., 1946.—"Studies on filariasis in Papua, New Guinea." 6 (4), 189–192.

485—National Fur News.

*a. GUNN, C. K., 1946.—"The control of fox parasites." 18 (7), 10, 15, 22–25, 27, 32.

486—Natuurwetenschappelijk Tijdschrift voor Nederlandsch Indië.

a. GAN KOEN HAN, 1946.—"Researches of the life-history of *Diphyllobothrium ranarum*." 102 (5), 87.

(486a) Gan Koen Han briefly summarizes his thesis "Experimenteel onderzoek over den ontwikkelingscyclus van *Diphyllobothrium ranarum*" which was published in Batavia in 1941 (?). Frogs and toads are naturally infected with *D. ranarum* in the neighbourhood of Batavia. The first intermediary is a *Cyclops* sp. (?) commonly present in the local ponds and rice fields. Under experimental conditions 44 out of 161 tadpoles acquired infection from the Cyclops. Spargana collected from infected tadpoles developed into adults in cats, but so far no naturally infected tadpoles have been found. Mice and monkeys readily acquired sparganosis by oral or intramuscular and intraperitoneal infection with infected Cyclops but not from infected frogs. This suggests that man may acquire infection from oral infection with infected Cyclops or with spargana from frogs. R.T.L.

487—Nederlandsch Tijdschrift voor Geneeskunde.

a. SMALT, F. H., 1946.—"Baant de in den normalen darm uit het ei gekomen larve van *Enterobius vermicularis* (Oxyuris) zich een weg door het milieu intérieur van den mensch?" 90 (16), 333–334.
b. SWELLENGREBEL, N. H., 1946.—"Besmettingsproeven met oxyuris." 90 (27), 762–764.
c. WILDERVANCK, L. S., 1946.—"Het uitbraken van een *Taenia saginata*." 90 (27), 779–780. [English, French & German summaries p. 780.]
d. HULST, D. L., 1946.—"Een geval van echinococcus in den buik." 90 (41), 1381–1383. [English, French & German summaries p. 1383.]

(487a) In an attempt to follow the migration of *Enterobius vermicularis* Smalt has carried out a series of post mortems. In one case (that of a 2-years-old child who had died of tuberculosis) anal swabs were positive while flotation of the intestinal contents proved negative. Contents of stomach, duodenum, upper ileum and rectum were not examined but the whole of the digestive tract was found to be infested with several hundred larvae and mature worms of both sexes. The contents of the jejunum revealed a larva, 277 μ in length, which Smalt believes to be a "missing link" in the development of Enterobius. He considers it extremely improbable that the worm is more than a commensal in the normal intestine. Smalt thinks it highly desirable that further investigations should be made, emphasizing that the chances of finding young larvae in the upper parts of the intestine are small. A.E.F.

(487b) Washed dust from a school where the children were known to be infected with Enterobius, and which was at least three days old, caused infection in six out of eight volunteers when from 40–80 eggs were ingested on bread. The experiments also showed that enterobiasis disappears spontaneously if finger and dust infections can be avoided. Treatment should only be given in cases of "active" enterobiasis: the wearing of pyjamas and strict cleanliness of hands and anus are absolutely essential. A.E.F.

488—New England Journal of Medicine.

a. LEWIS, R. A., 1946.—"Enteric infections and their sequelae." 235 (16), 571–581.
b. OBER, R. E., 1946.—"Trichinosis. A review of cases in Massachusetts from 1936 to 1945." 235 (24), 839–842.
c. SAPERO, J. J., 1946.—"Tropical diseases in veterans of World War II." 235 (24), 843–846.
d. LEVINE, H. D., 1946.—"Medical experiences with American troops in the Pacific, with remarks on the diagnostic value of sternal puncture in malaria and on the innocuousness of hookworm infection." 235 (26), 933–938.

(488a) With the exception of schistosomiasis, bacillary dysentery and other intestinal parasites did not present any special problems in diagnosis or treatment of 105 patients in a U.S. Army general hospital unit. Strongyloidiasis may suggest schistosomiasis when there is marked eosinophilia. R.T.L.

(488c) Of cases of tropical diseases which occurred in the U.S. Armed Forces between 1942 and 1945 it is estimated that hookworm accounted for 19,943, filariasis bancrofti for 14,000 and schistosomiasis for 1,672. R.T.L.

489—New Zealand Medical Journal.

a. TREAHY, P. A., 1946.—"Infestation with bilharzia. Report of a case." 45 (250), 541–542.

490—Norsk Veterinaer-Tidsskrift.

a. SLAGSVOLD, L., 1946.—"Snylterplagen hos hest." 58 (1), 2–18.

(490a) Slagsvold gives an account of the pathogenic action and importance of each of the common horse parasites, and discusses present-day methods of treatment. E.M.S.

491—North Carolina Medical Journal.

a. SISK, W. N., 1946.—"Difficulties in the diagnosis and treatment of pinworm infection." 7 (6), 250–253.
b. SIMMONS, J. S., 1946.—"Future implications of the Army's wartime experience with tropical diseases." 7 (7), 291–296.

(491a) The cellophane swab technique is much more reliable than direct microscopical examination of faeces for the diagnosis of *Enterobius vermicularis* infections. Even this method is unreliable in light infections. Treatment must be applied to the whole household at the same time to prevent reinfection. Phenothiazine and gentian violet cause toxic symptoms in many patients but are reasonably effective. Butolan, tried in 12 cases, cured four. Six capsules, containing 0·2 gm. each, of "Lubisan" were given to 51 adults on three successive mornings on an empty stomach, breakfast being withheld for three hours; treatment was repeated for three more days after an interval of four days. There were no toxic symptoms and 37 of the patients were found to be free from infection three weeks after completion of the treatment. R.T.L.

(491b) The Chief of the Preventive Medicine Service, U.S. Army, sums up experiences with tropical diseases in American troops during the second world war. Only about 2,000 cases of filariasis were seen, all of them mild, with no serious permanent symptoms. The chance of establishing endemic centres in the U.S.A. is considered slight. Less than 2,000 cases of schistosomiasis japonica were reported, chiefly in troops

necessarily exposed to infested waters. Every effort has been made to detect and treat cases in returned prisoners-of-war. The chance of spreading the infection within the U.S.A. is considered remote, as susceptible snail hosts are not known to occur. E.M.S.

492—Notationes Biologicae. Bucarest.

a. VASILIU, G. D. & RADULESCO, I., 1946.—"Note sur l'infestation du Silure (*Silurus glanis* L.) de la Delta du Danube, par les larves d'*Eustrongylides excisus* Jägerskiöld." 4 (1 3), 179–181.

b. VASILIU, G. D. & RADULESCO, I., 1946.—"Infestation par *Proteocephalus osculatus* (Göze) La Rue du *Silurus glanis* L. dans le Delta du Danube." 4 (1/3), 197–200.

493—Nursing Mirror and Midwives' Journal.

a. BLACKHAM, R. J., 1946.—"Rare diseases of returning service men. 4. Ancylostomiasis." 82 (2133), 313–314.

b. BLACKHAM, R. J., 1946.—"Rare diseases of returning service men. 5. Schistosomiasis." 82 (2134), 335–336.

494—Occasional Papers on Mollusks, Museum of Comparative Zoology, Harvard University.

a. ABBOTT, T., 1946.—"The egg and breeding habits of *Oncomelania quadrasi* Mlldff., the schistosomiasis snail of the Philippines." 1 (6), 41–48.

495—Österreichische Zoologische Zeitschrift.

a. PAESLER, F., 1946.—"Beitrag zur Kenntnis der im Dünger lebenden Nematoden." 1 (1/2), 87–128.

(495a) Paesler studied the nematodes living in various kinds of animal droppings mixed with straw or other plant remains. Of the many species found the following are new to science: *Rhabditis crenata* n.sp., *R. tricincta* n.sp., *Diplogaster irregularis* n.sp., *D. longisetosus* n.sp., *D. parastriatus* n.sp., *D. inaequidens* n.sp., *D. superbus* n.sp., *Aphelenchoides mucronatus* n.sp. The male of *Demaniella cibourgensis* is described for the first time. T.G.

496—Ohio Journal of Science.

a. ZELIFF, C. C., 1946.—"A new species of *Cyclocoelum* (a trematode) from the eastern solitary sandpiper." 46 (6), 340–342.

(496a) *Cyclocoelum nittanyense* n.sp. is described. It occurred in the air-sac of *Tringa solitaria solitaria* collected at Lemont, Pa. R.T.L.

497—Paris Médical.

*a. DESCHIENS, R., 1946.—"Le diagnostic des infestations parasitaires du tube digestif." 2, 343–347.

498—Pediatria. Naples.

a. FEROLA, R., 1946.—"Sulla frequenza della parassitosi intestinale nell'infanzia." 54 (7 9), 426–431. [English, French & German summaries p. 431.]

(498a) Faecal examination was made of 244 Naples children aged between one and thirteen years. Among the 156 positive cases the following helminths were found: Ascaris 59%, Trichuris 56%, *Hymenolepis nana* 11·8%, Enterobius 0·8%. The children were further examined by cellophane swab on three alternate days and Enterobius was found in 69%. E.M.S.

499—Pediatricke Listy.

*a. BORES, J., 1946.—"Skrkavky v rentgenovem obraze." 1 (4), 170–172.

500—Pennsylvania Medical Journal.

a. CORFF, M., 1946.—"Volvulus and gangrene of sigmoid complicated by Manson's schistosomiasis." 49 (6), 632–636.

501—Pharmazie. Berlin.

*a. AWE, W., 1946.—"Die Chemie der gebräuchlichen Wurmmittel." 1, 21–26, 72–76.

502—Plant Disease Reporter.

a. ELLIS, D. E. & COX, R. S., 1946.—"Notes on some vegetable diseases in North Carolina in 1946." 30 (12), 458–460.
b. VALLEAU, W. D. & JOHNSON, E. M., 1946.—"Tobacco diseases in Kentucky, 1946." 30 (12), 465–467.

(502a) *Heterodera marioni* caused a loss of about 15% of the spring lettuce crop in two fields in New Hanover County, North Carolina. These fields had been cropped with susceptible soya beans in the previous year. R.T.L.

(502b) *Pratylenchus pratensis* was abundant in tobacco roots of several burley varieties in a brown root-rot plot and in several grasses, legumes and weeds, at Lexington, Kentucky. The tobacco plants seemed to start slowly. R.T.L.

503—Policlinico (Sezione Chirurgica).

a. FRUGONI, P. & POZZI, A., 1946.—"Echinococcosi vertebrale." 53 (1/2), 1–26.

504—Policlinico (Sezione Pratica).

a. MENNA, L. & MARINACCIO, G., 1946.—"Sull'incidenza degli elminti nell'appendice. (Inchiesta nel vivo e nel cadavere)." 53 (7 8), 148, 151.
b. ZANNINI, G., 1946.—"Cisti da echinococco del fegato aperte nelle vie biliari. (Contributo clinico)." 53 (46), 1013–1016, 1019–1022.
c. DONZELLI, F., 1946.—"Su di un focolaio di trichinosi in Sicilia. (Note cliniche ed epidemiologiche)." 53 (50), 1149–1152, 1155.
d. ALIERI, F., 1946.—"Sull'ascaridiosi in chirurgia." 53 (50), 1155–1158, 1161–1164, 1167.

(504c) Donzelli reports a severe outbreak of trichinelliasis in 1945 in Montemaggiore, Sicily, involving 84 cases with 13 deaths. The infestation was traced to sausages prepared from pigs slaughtered without inspection. Outbreaks in 1933 in Casteltermino (caused by pork from Montemaggiore) and in 1942 in Villafrati, Palermo, indicate the existence of a focus of infection in Sicily. The disease is not autochthonous in Italy. E.M.S.

505—Prensa Médica Argentina.

a. CHIESA, C. O., 1946.—"Contribución al estudio del quiste hidatídico de tiroides." 33 (18), 931–934.
b. DICKMANN, G. H., 1946.—"Cisticercosis de la fosa craneana posterior (4 casos)." 33 (32), 1628–1638.
c. SACCOMANNO, T. G., 1946.—"Nuevo tratamiento de la teniasis." 33 (32), 1657–1658.
d. ROSSI, A. A. & BRUZZONI, N. R., 1946.—"Apendicitis por tenia." 33 (41), 2085–2086.
e. BAZTERRICA, E., COURETOT, M. F. & HUARTE AZCUE, A. A., 1946.—"Quiste hidatídico del hígado abierto en las vías biliares asociado a litiasis vesicular y coledociana." 33 (42), 2112–2132.
f. OBARRIO, J. M. & OBARRIO. Jr., J. M., 1946.—"Confusión mental por quiste hidático de hígado supurado." 33 (52), 2571–2573.

(505c) The antimalarial drug Metoquina (the hydrochloride of 2-methoxy-6-chloro-9, α-diethylamino-δ-pentylaminoacridine) was administered in five cases of taeniasis saginata. Patients were fasted and given 0·8 gm. of Metoquina, followed four hours later by an oily purgative. In one case treatment had to be repeated after an interval of ten days. Expulsion of the worm was complete in every case, including the scolex. Transitory yellow staining of the skin was observed. E.M.S.

506—Press Bulletin. Florida Agricultural Experiment Station.

a. BRATLEY, H. E., 1946.—"Weeds as a factor in the control of root-knot in tobacco fields." No. 629, 4 pp.

(506a) Bratley reports on the occurrence of root-knot, due to *Heterodera marioni*, on the roots of weeds on plots lying fallow for two years after cropping with tobacco for one year. Out of 107 weed species examined, 25 were found to be susceptible; these are listed under their scientific and popular names and notes are given on the characteristics of the galls, the type of root, and the ease or otherwise of eradication of the ten most susceptible species. T.G.

507—Presse Médicale.

a. GOINARD & DESCUNS, 1946.—"Trois observations de kystes hydatiques du cerveau." **54** (10), 143–144.
b. COSACESCO, A. & VEREANO, D., 1946.—"Le kyste hydatique épidural primitif." **54** (63), 871–872.

508—Proceedings of the American Society for Horticultural Science.

a. LOWMAN, M. S. & KELLY, J. W., 1946.—"The presence of mydriatic alkaloids in tomato fruit from scions grown on *Datura stramonium* rootstock." **48**, 249–259.

(508a) In the southern United States, where tomato plants suffer severely from root-knot injury, the plants are sometimes grafted on the rootstock of *Datura stramonium* which is resistant to infection; these plants grow well and produce excellent fruit. The fruits of several varieties of tomatoes so grafted were analysed for alkaloid content. It was concluded that some poisonous stramonium alkaloids are ingested when the tomatoes are eaten, that if taken in normal quantities the probability of serious or fatal poisoning is remote, but that the possibility of serious consequences should be recognized. R.T.L.

509—Proceedings of the Indiana Academy of Science.

a. ANDERSON, D. J., 1946.—"Determination of the life-history of *Cercaria szidati*, a furcocercous larva of the Vivax type." [Abstract.] **55**, 182.
b. HOPP, W. B., 1946.—"Notes on the life-history of *Neoechinorhynchus emydis* (Leidy), an acanthocephalan parasite of turtles." [Abstract.] **55**, 183.
c. SEITNER, P. G., 1946.—"Notes on a giant cystocercous cercaria and its life history." [Abstract.] **55**, 183.

(509a) The bifid-tailed *Cercaria szidati* encysts in the muscles of minnows. The cysts developed experimentally in chicks and a great blue heron into adult *Linstowiella* similar to but not identical with *L. viviparae*. Anderson remarks that whereas the cercaria and adult are monostomes, closely related species are distomatous. R.T.L.

(509b) Juvenile forms of *Neoechinorhynchus emydis* were found in the foot of the snail, *Campeloma* sp., and immature worms were recovered from the intestine of painted turtles, *Chrysemys bellii marginata*, which had been fed on the infected snails. This is apparently the first occasion on which a molluscan intermediary has been found in the life-cycle of an acanthocephalan. The adults occur in *Graptemys geographica* from the Tippecanoe River. R.T.L.

(509c) A new cystocercous cercaria over 19 mm. in length occurs in *Pleurocera acuta* and *Goniobasis livescens*. Unlike other azygiid larvae the tail furcae are weakly developed. The cercaria is progenetic and the uterus may contain over 50 eggs, many advanced in development. It resembles closely *Proterometra macrostoma* although its larva is very different. R.T.L.

510—Proceedings of the Institute of Medicine of Chicago.

a. HARTS, M., CARTER, M. & SWIETZER, C., 1946.—"Early pathologic changes in skeletal muscle in trichinosis." 16 (8), 255.

511—Proceedings of the Lenin Academy of Agricultural Sciences of U.S.S.R.

a. POTEMKINA, V. A., 1946.—[Method of ridding calves of Moniezia by pre-imaginal medication.] 11 (1/2), 42–45. [In Russian.]
b. ABULADZE, K. I., 1946.—[Methods of diagnosis and therapy of tapeworm diseases in domestic ducks.] 11 (1/2), 46–48. [In Russian.]

(511a) To control Moniezia in calves in districts where this infestation is common, Potemkina advises dosing with 2 c.c. per kg. body-weight of a 1% solution of copper sulphate 30–40 days after the calves are put out to pasture. This dose was efficient in 75–80% of calves, improved their condition, gave increased weight and stopped diarrhoea. To complete the treatment, she advises repeating the dose after 30 days. C.R.

(511b) Abuladze, examining ducks in the Moscow district and in the Ukraine, found the following species of tapeworms: *Drepanidotaenia lanceolata, Hymenolepis anatina, H. gracilis, H. coronula, H. collaris, H. parvula, Hymenolepis* sp., and *Fimbriaria fasciolaris*. He experimented with the anthelmintics arecolin, kamala, extract of filix mas and copper sulphate. The best results were obtained with 0·002 gm. of arecolin per kg. body-weight given *per os*. Food was withheld for 12–18 hours before treatment. Diagnosis may be made on the results of treatment or by examining faeces for segments. C.R.

512—Proceedings of the Moscow Zoological Park.

a. BONDAREVA, V. I., 1946.—[Parasitic worms in the Daghestan wild goat (*Capra cylindricornis* Blyth.).] 3, 125–129. [In Russian: English summary p. 129.]
b. SHAKHNAZAROVA, N. G., 1946.—[Helminth-ovoscopic diagnosis of echinuriasis in ducks.] 3, 130–135. [In Russian: English summary p. 135.]
c. ROMANOVA, N. P., 1946.—[Diagnosis of *Cyathostoma* infection in the emu.] 3, 136–143. [In Russian: English summary p. 143.]
d. SHAKHNAZAROVA, N. G., 1946.—[The control of ascaridosis in large carnivorous mammals in the Moscow Zoological Park.] 3, 144–156. [In Russian: English summary p. 156.]

(512a) All the eleven species of helminths found in eight specimens of *Capra cylindricornis* in the Moscow Zoological Park were parasites common to a wide range of wild and domestic ruminants. The goats had evidently been infected in the Park and it is not considered that the list of helminths found represents their natural fauna. E.M.S.

(512b) Shakhnazarova compared the efficacy of the concentrated saline, magnesium sulphate and hyposulphite flotation techniques and of the "washing-off" method in the diagnosis of echinuriasis in ducks. Flotation with saturated hyposulphite solution proved the most effective method. Not less than an hour should be allowed for settling. The specific gravity of the eggs appears to be slightly less than 1·2. The eggs are described. E.M.S.

(512c) Romanova compared various methods of examining faeces and tracheal mucus of infected emus for the eggs of *Cyathostoma* sp. The eggs are described. Their specific gravity is about 1·11, and the Fülleborn technique was selected as being the cheapest and at the same time adequately effective. In examining tracheal mucus, the "native" smear method proved better than the Telemann and Brumpt techniques. Eggs were more numerous in mucus taken during the first half of the day. Examination of mucus was quicker and more reliable than faecal examination. *Cyathostoma* sp. in the trachea of the emu attains sexual maturity in 21–28 days. E.M.S.

(512d) Effective control of ascarids in carnivores in zoological gardens requires the co-ordination of (i) anthelmintic treatment, (ii) disinfection of the external environment and (iii) measures to increase the resistance of the animals. Shakhnazarova has found that anthelmintics alone do not give complete control, and that increasing the immunity by dietary measures and by artificial immunization would necessitate a special investigation as to its adaptability to the conditions of the Moscow Zoological Park. Disinfection by means of ultra-violet rays offers possibilities, as eggs in the animals' fur might be destroyed by this means. A special electrical apparatus was designed to disinfect and dry the premises by a jet of hot air at a temperature of 225°–250°C. Ascarid ova were destroyed by this method in ½ to 1 minute per linear metre on a dry surface and in 2 minutes in a thin layer of water. The disadvantage of the method is the time required, 1 hour 20 minutes for a cage area of 10 sq. metres. E.M.S.

513—Proceedings. United States Livestock Sanitary Association.

a. SCHWARTZ, B., 1946.—"Some wartime developments in livestock parasite control." 49th Annual Meeting (1945), pp. 73–82.
b. UNITED STATES LIVESTOCK SANITARY ASSOCIATION, 1946.—"Report of Committee on Parasitic Diseases." 49th Annual Meeting (1945), pp. 83–85.

(513b) Internal parasites were dealt with very briefly in this report, the only matters discussed being the administration of phenothiazine in salt licks or in loose salt, and the use of sodium fluoride, then newly developed as an experimental anthelmintic for Ascaris in pigs. E.M.S.

514—Proceedings of the Zoological Society of London.

a. HAMERTON, A. E., 1946.—"Report on the deaths occurring in the Society's Gardens during the year 1944." **115** (3-4), 371–384.
b. PORTER, A., 1946.—"Report of the honorary parasitologist for 1944." **115** (3-4), 384–386.
c. LITVINOVA, N. F., 1946.—"Four new species of *Tylenchorhynchus* (Nematoda) from Kazakhstan." **116** (1), 120–128.

(514a) Hamerton reports the death of an Australian sheld duck (*Casarca tadornoides*) from occlusion of the syrinx with a tangled mass of *Syngamus trachea*. Fatal enteritis and denudation of the intestinal epithelium in a British great spotted woodpecker (*Dryobates major anglicus*) are attributed to cestodes. Inanition due to mass infection with cestodes caused the death of a common starling (*Sturnus vulgaris*). R.T.L.

(514b) From *Anthropopithecus troglodytes* [= *Pan satyrus*] the following helminths are reported: *Enterobius* sp., *Trichuris* sp., *Oesophagostomum* sp. and *Necator americanus*. *Hymenolepis diminuta* is recorded from *Canis familiaris*. Various common nematode parasites were noted in a number of other mammalian hosts. Striking reductions in the egg-counts of *Necator*, *Oesophagostomum*, *Enterobius* and *Trichuris* are noted after six weeks of special dieting of a young chimpanzee. R.T.L.

(514c) Litvinova has made a study of species of the nematode genus *Tylenchorhynchus* occurring around the roots of plants in the region of Alma-Ata, Kazakhstan. She gives illustrated technical descriptions and measurements of the following four new species: *Tylenchorhynchus brachycephalus* n.sp., *T. kegenicus* n.sp., *T. manubriatus* n.sp. and *T. galeatus* n.sp. T.G.

515—Progrès Médical.

a. LOEPER, M., COURJARET & TRÉLAT, 1946.—"Sur un cas de distomatose du foie." **74** (15), 339–341.

516—Progresso Medico. Naples.

*a. LUCREZI, G. & ZITO, P., 1946.—"La riserva alcalina del sangue nell'anchilostomiasi." **2**, 301–303.

517—Publicación. Escuela de Veterinaria. Universidad de Buenos Aires.

a. MORINI, E. G. & GALOFRE, E. J., 1946.—"Acción antiparasitaria y orgánica de la fenotiacina en el equino." No. 1, 70 pp. [English summary p. 68.]

(517a) Morini & Galofre tested the effect of phenothiazine in horses when administered alone, when followed by purgatives (castor oil, aloes), or when combined with oral administration of oil of chemopodium or intravenous urotropine [hexamine]. Treatment is contra-indicated in animals in poor condition, unless this is of parasitic origin. The use of purges of any type is not advisable, and urotropine injection is contra-indicated. Post-mortem lesions were observed most frequently in the liver, adrenal cortex and kidney, but were not considered attributable to phenothiazine. E.M.S.

518—Publications. Institut Pasteur de la Guyane et du Territoire de l'Inini.

a. FLOCH, H., 1946.—"Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane Française et du Territoire de l'Inini pendant l'année 1945. Pseudo-myiase rampante." No. 125, pp. 49–51.
b. FLOCH, H., 1946.—"Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane Française et du Territoire de l'Inini pendant l'année 1945. Bilharzioses." No. 125, pp. 75–77.
c. FLOCH, H., 1946.—"Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane Française et du Territoire de l'Inini pendant l'année 1945. Parasitisme intestinal." No. 125, pp. 77–82.
d. FLOCH, H., 1946.—"Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane Française et du Territoire de l'Inini pendant l'année 1945. Filarioses d'importation en Guyane Française." No. 125, pp. 88–90.
e. FLOCH, H., 1946.—"Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane Française et du Territoire de l'Inini pendant l'année 1945. Filariose à *W. bancrofti*." No. 125, pp. 90–99.
f. FLOCH, H. & LAJUDIE, P. DE, 1946.—"Pseudo-myiase rampante en Guyane Française." No. 134, 4 pp.

(518b) Since 1939, 17,179 faecal samples had been examined at the Pasteur Institute, and eggs of *Schistosoma mansoni* were found in only ten ; in all cases the patients came from endemic areas, the Antilles in particular. Floch does not consider that a focus of infection has been established in French Guiana. Repeated examination of fresh-water molluscs in the area had not revealed *Australorbis glabratus*. A small planorbid, *Tropicorbis kuennianus*, was found near Cayenne but was not parasitized. Urinary schistosomiasis has been recorded only in Senegalese infantrymen serving in French Guiana. Although there is a considerable Chinese population, schistosomiasis japonica has never been recorded. E.M.S.

(518c) During 1945 at the Institute 2,047 faecal samples were examined by direct smear, of which 1,228 (59%) revealed parasites as follows : hookworm in 828 (40% of the total, 67% of those with parasites), Trichuris in 343, Ascaris in 281, multiple infections in 288. Comparison of the incidences for the seven years 1939–1945 with those observed by Labernadie & Marneffe in 1922–1927 (given below in parenthesis) show a considerable reduction in parasitism, especially by Ascaris and Trichuris, viz., hookworm 33% (54%), Ascaris 8% (25%), Trichuris 9% (26%), *Schistosoma mansoni* 10 cases (65 cases), single infections 7,168 (5,674), multiple infections 1,718 (4,595). There were 938 (628) cases of strongyloidiasis, and 6 (7) of tapeworms. With the exception of hookworm disease, parasitism was less widespread in the penal settlement in 1939-40 than in the free population, though the general reduction in incidence made this tendency less marked than in the earlier survey. During 1945 the Willis enrichment method was also used on 596 stools and gave higher figures for hookworm and Trichuris, but lower figures for Ascaris ; hookworm and Strongyloides larvae were not found by this method. Eggs measuring 120–130μ × 80–90μ were found once and at first considered to be giant hookworm eggs, but dissection of embryonated specimens showed them to be those of a mite. E.M.S.

(518d) Floch summarizes the records of *Acanthocheilonema perstans* and *Loa loa* in foreigners in French Guiana. [See also Helm. Abs., Vol. XIV, No. 553a.] E.M.S.

(518e) [For a fuller account of this work, see Helm. Abs., Vol. XIV, No. 273.]

(518f) Three additional cases of pseudo-myiasis in French Guiana are attributed on clinical grounds to *Ancylostoma braziliense*. None of the pulmonary complications reported by Wright & Gold were observed. R.T.L.

519—Publications. Tobacco Research Board, Southern Rhodesia.

a. ANON., 1946.—"Root knot nematode." No. 9 [Annual Report of the Trelawney Tobacco Research Station for 1945], pp. 39–82.

(519a) This report covers the third year of a large series of experiments by R. W. Jack on the effects of agronomic factors on the yield and infestation with *Heterodera marioni* of tobacco of the variety Bonanza [see also Helm. Abs., Vol. XIV, No. 463a]. The assessment of infestation from indicator-plant lesions is not satisfactory in hyperinfested soil since, above a certain threshold, indicator plants are insensitive to further increases in eelworm density. There were again no significant differences due to additional hoeings in winter. The rotations : sunn hemp, maize, tobacco ; sunn hemp, tobacco, tobacco ; and Kaffir beans, sunflowers, tobacco, gave respectively infestation indices of 19, 56, and 91% (all differences significant) and the first two gave significantly higher yields than the third, where alone there was high correlation with infestation. Moderate infestations do not seriously reduce yield. Land under dhal for two years gave a higher infestation and lower yield than land under weed fallow. Single-season treatments involving bare fallow, weed fallow, and each of seven crops before tobacco, showed bare fallow and groundnuts clearly superior to all others in infestation ; bare fallow also gave the highest yield. Another experiment with tobacco following cotton (9L34), sunn hemp, Kaffir beans, or weed fallow, showed cotton significantly better than others for both infestation and yield, and sunn hemp or weeds better than Kaffir beans. Compost at 0, 4, 8, and 16 tons per acre gave no significant differences in infestation or yield in any of the three successive years ; at all rates there was a marked increase in infestation in the third year. One to five trap crops (sunflowers) in a single season had no effect on infestation or yield. "Hills" were again better than the standard ridges, although the infestation difference was not significant. Early planting gave higher infestation and higher yield than late planting. An experiment with three fertilizer levels gave no significant differences. Fertility of soil may prevent nematode injury even in heavily infested soils. After a general summary and discussion of the field trials several minor experiments are described. Four of 12 soil samples taken from within the flood limits of a stream were found infested : none of 12 from above the limits. Data on depth distribution down to 12 in. are given together with the corresponding soil moisture data : by the end of the dry season no eelworms were in the top 4 in., and they move up very slowly after the rains. Infestation is generally higher in the lower 6 in. which largely invalidates surface cultivation as a means of control. A solid-floored seed bed, 7 in. deep, cleared of weeds became free from infestation during the dry season. Attempts to measure the duration of the life-cycle by Godfrey's method (infested roots on wet gauze) were vitiated by the discovery that the wetter the eggs the shorter the development period. The period from larva to egg deposition varied from 14 to over 21 days, and is probably over 40 days under field conditions in the wet season. Infested roots in a saturated atmosphere but not in contact with free water failed to produce larvae. Severed infested roots will continue to yield larvae for over 100 days. In the field, breeding continues in plants left standing through the dry season, at least until the plant dies. Water pressures of 100 lb. for 24 hours have no effect on larvae. There are additions and corrections to the previously listed native and weed hosts of *H. marioni*. B.G.P.

520—Puerto Rico Journal of Public Health and Tropical Medicine.

a. CULBERTSON, J. T., ROSE, H. M., HERNÁNDEZ MORALES, F., OLIVER GONZÁLEZ, J. & PRATT, C. K., 1946.—"The experimental chemotherapy of filariasis bancrofti." 22 (2), 139–173. [Also in Spanish pp. 174–209.]

b. OLIVER GONZÁLEZ, J. & HERNÁNDEZ MORALES, F., 1946.—"Quantitative determination of *Schistosoma mansoni* ova in feces from patients under treatment with antimonial drugs." 22 (2), 210–216. [Also in Spanish pp. 217–223.]

c. HERNÁNDEZ MORALES, F., PRATT, C. K. & OLIVER GONZÁLEZ, J., 1946.—"The treatment of schistosomiasis mansoni. Evaluation of the parasitotropic effects of fuadin and tartar emetic." 22 (2), 224–227. [Also in Spanish pp. 228–232.]

(520a) Of over 40 drugs tested on filarial infection in the living cotton-rat and on freshly removed adult *Litomosoides carinii*, only those which contained antimony were significantly effective on the adult worms and these also caused a gradual decline in the number of circulating microfilariae. These observations were followed by studies on 114 Puerto Rican patients with filariasis bancrofti, using neostibosan, neostam, urea stibamine, stibanose, fouadin, anthiomaline (Specia), anthiomaline (Merck), tartar emetic and melarsen oxide (which does not contain antimony). All except stibanose and neostibosan produced severe reactions in the dosages used, and stibanose had no powerful effect on the filarial infection. Neostibosan proved really effective and showed the greatest promise of practical use as it can be used with comparative safety. It is well tolerated and exerts a strong antagonistic effect on the filarial worms. The disappearance of microfilariae from the circulation is not a direct result of the action of the drug but is attributed to the death of the adults. Embryos may not disappear up to 15 or 18 months after treatment in some patients. Seventeen tables give statistical details. [See also Helm. Abs., Vol. XVI, No. 161b.] R.T.L.

(520b) A method is described for counting live and dead eggs of *Schistosoma mansoni* in faeces. Live and dead eggs disappeared simultaneously in six individuals treated with anthiomaline and with urea stibamine. It is held that the dead eggs found in faeces are either laid by the worms or else that they die during their transit from the site of extrusion, and are not those previously caught in the tissues. R.T.L.

(520c) 60·4% of a group of patients suffering from schistosomiasis mansoni were apparently cured after a course of fouadin comprising at least 120 c.c. of a 1% solution, whereas 68·18% were apparently cured by a course of 120 c.c. of tartar emetic. A second course of fouadin brought about cures in 48·49% while a second course of tartar emetic was effective in about 76·3%. Fouadin, however, is believed to be the drug of choice, owing to the relative ease of administration and the shorter period involved in treatment. R.T.L.

521—Radiography and Clinical Photography.

a. FLORES COVARRUBIAS, T., 1946.—"Multiple cerebral cysticercosis." 22 (2), 60–62.

522—Radiologia Clinica. Basle.

a. GERULEWICZ, E., 1946.—"Zürcher Erfahrungen der Strahlentherapie des *Echinococcus alveolaris* der Leber." 15 (4), 230–235. [English, French & Italian summaries pp. 234–235.]

523—Radiology.

a. HAMILTON, J. B., 1946.—"*Taenia saginata*: a case report." 47 (1), 64–65.

b. WEIR, D. C., 1946.—"Roentgen diagnosis of ascariasis in the alimentary tract." 47 (3), 284–286.

c. ARIAS BELLINI, M., 1946.—"Osteohydatidosis: its radiological features." 47 (6), 569–574.

(523a) Two radiographs show that *Taenia saginata* in the large intestine can be detected by X-ray examination. R.T.L.

524—Rassegna Italiana d'Ottalmologia.

a. CONTINO, F., 1946.—"Contributo alla terapia chirurgica del cisticerco sottoretinico." 15 (5/6), 165–181.

525—Recueil de Médecine Vétérinaire.

a. LE SEAC'H, 1946.—"La perdrix du Tell algérien. Son ténia · particularités d'évolution." 122 (8), 353–359.
b. LAGNEAU, F., 1946.—"Localisations inhabituelles de coenures chez le lapin." 122 (10), 452–456.
c. LAMOTTE, P., 1946.—"Échinococcose massive du foie chez une truie." 122 (11), 501–502.
d. GOZLAN, H., 1946.—"Sur de prétendus cas de trichinose humaine." 122 (12), 550–552.

(525a) The partridge of the Algerian Tell is heavily parasitized during the summer by a small cestode, probably a *Davainea* sp. At that season the birds feed largely on ants, and Le Seac'h was able to produce infestation in caged young birds fed on these insects, which are probably the intermediate host. The infestation disappears towards the end of October, and in every case from the beginning of the rains. An immunity is postulated associated with the seasonal change in the bird's diet. E.M.S.

(525b) Lagneau reports *Coenurus serialis* in two unusual situations in rabbits. In one rabbit a single coenurus was found in the abdominal cavity attached to the small intestine, while in another numerous coenuri were observed in the thoracic cavity concealing heart and lungs. Clinical symptoms and post-mortem findings are recorded. H.C.

(525d) Microscopical examinations of reputed cases of trichinelliasis failed to confirm the clinical diagnosis. The urticarial symptoms are attributed to intestinal absorption of toxins from fish and meat. R.T.L.

526—Report of the Chief of the Bureau of Animal Industry. United States Department of Agriculture.

a. UNITED STATES BUREAU OF ANIMAL INDUSTRY, 1946.—"Livestock and poultry parasite investigations." Year 1945–1946, pp. 42–52.

(526a) This report, summarizing the investigations carried out by the staff of the Zoological Division of the Bureau of Animal Industry on the parasites of livestock and poultry during 1945 to 1946, deals with "weekly salting with phenothiazine mixture for control of sheep parasites" and claims that the data obtained show that the regimen of weekly salting has promise as a measure for controlling the gastro-intestinal roundworms. The "results of self-medication with phenothiazine and salt" in the ratio of 1 : 9 after a trial extending over four years, showed clearly the practical benefits of self-medication in an experimental flock. Lead arsenate was effective in removing *Moniezia expansa* and in checking diarrhoea in lambs. Lamb scours did not follow upon the experimental superimposition of an infection of small trichostrongyles upon an existing infection with *Haemonchus contortus*. Freedom of pigs from parasites had a greater influence than feeding with skim milk on gain in weight, and pigs free from parasites were ready for market sooner than those which were worm-infested. Sodium fluoride, at a rate of 0·75% of the feed for one day, was found to be a safe and effective remedy against Ascaris in pigs. R.T.L.

527—Report of the Council for Scientific and Industrial Research, Australia.

a. AUSTRALIA. McMASTER ANIMAL HEALTH LABORATORY, 1946.—"(i) Parasitological investigations." 20th (1945–46), pp. 26–27.

(527a) Copper sulphate was moderately to highly effective against *Haemonchus contortus* when 2 or 3 gm. were injected into the rumen, although 1 gm. was ineffective. In trials with phenothiazine on 80 young sheep the efficiency of the drug increased directly with the dose and was still rising at 50 gm. Micronized phenothiazine was not statistically

more effective than commercial phenothiazine in sheep. The daily intake from phenothiazine licks seldom reached 0·2 gm. and had no apparent anthelmintic effect; fleece staining was conspicuous. These licks are considered ineffective under Australian conditions. The appetite of sheep dosed with *Oesophagostomum columbianum* larvae decreased 50% within 3 weeks with a 20 to 30% loss of weight which was not regained for 7 to 11 months. Copper sulphate solution brought about the oesophageal groove reflex in only a few sheep when given by a drenching syringe, but when a bottle was used it was highly effective. R.T.L.

528—Report of the Department of Agriculture, Cyprus.

a. McDONALD, J., 1946.—"Parasitic diseases of sheep and goats." Year 1945, p. 5.

(528a) In Cyprus the incidence of parasitic gastro-enteritis is high in many areas although noticeable improvement has followed regular dosing with copper sulphate-nicotine drenches. A large number of sheep were treated for liver-fluke by intra-rumenal injections of carbon tetrachloride. R.T.L.

529—Report. Experimental and Research Station, Cheshunt.

a. SPEYER, R. R. & PARR, W. J., 1946.—"Animal pests. 5. Root-knot eelworm (*Heterodera marioni*, Cornu)." 31st (1945), pp. 78–79.

(529a) From a small experiment with a 1% dilution it appears unlikely that sodium ethyl xanthate applied to the soil would protect the roots of tomatoes from infection with *Heterodera marioni*. R.T.L.

530—Report. Florida Agricultural Experiment Station.

a. ANON., 1946.—"Animal Industry." Year 1945–46, pp. 48–59.
b. ANON., 1946.—"Entomology." Year 1945–46, pp. 61–64.
c. HARRISON, A. L. & KELSHEIMER, E. G., 1946.—"Root-knot control." Year 1945–46, p. 118.

(530a) Swanson states that the larvae of *Haemonchus contortus*, *H. similis*, *Ostertagia ostertagi*, *Trichostrongylus axei*, *Cooperia* spp., *Oesophagostomum radiatum*, *Trichuris discolor*, *Bunostomum phlebotomum*, *Dictyocaulus viviparus* and *Nematodirus filicollis* from cattle were infective on a carpet-grass pasture for a period of 6½ months, but were unable to survive for 10–19 months. Emmel's laboratory experiments showed that the viability of common roundworm eggs of chickens is destroyed by the fuming action of sulphur applied to infested soil at the rate of 10 lb. per 100 square feet. The *p*H of the soil reached 3–4 within three months of the initial application under field conditions. Sanders finds that hexachlorethane is effective in destroying *Fasciola hepatica* in the liver of cattle, especially if used before extensive calcareous lesions occur in the bile ducts. The dose level should not exceed 10 gm. per 100 lb. live weight. Swanson reports that *F. hepatica* eggs from the gall-bladder of cattle hatch in 11–12 days in the laboratory and that this fluke causes serious loss in herds of cattle in nine counties of Florida. R.T.L.

(530b) Watson & Bratley have prepared as a press bulletin a tabulated list of 25 species of weeds found to be infected with *Heterodera marioni* in the fields used in the 3-year tobacco rotation tests [for abstract see above, No. 506a]. They found that Conch cowpeas, the "Creole" garden pea, tomatoes, and pimiento peppers showed nematode resistance. Fallen oak leaves used as mulching material form a dense compact mat which is effective in promoting the growth of nematode-susceptible plants in infested soil. R.T.L.

(530c) Harrison & Kelsheimer found that chloropicrin, D-D and Dowfume N injected into the soil at 200 lb. per acre on 12-inch centres gave good control of *Heterodera marioni*. D.D.T. failed to give any control. R.T.L.

531—Report of the Veterinary Department, Kenya.

a. DAUBNEY, R., 1946.—"Helminths." Year 1944, pp. 15–16.

(531a) Miss Duthy's observations that cattle can be infected with *Cysticercus bovis* by grazing a Kikuyu-grass plot six months after the application of *Taenia saginata* eggs has been confirmed and a similar experiment is in progress under the drier conditions at Naivasha. Van Someren has studied the incidence of cysticerciasis in cattle killed at Nairobi from European farms. Mann has continued experiments on immunization against *Cysticercus bovis*. Hatched embryos injected into calves intravenously and subcutaneously failed to produce infection although such embryos were infective orally. The inoculation of hatched eggs produced a more rapid degeneration of the cysts developing from a subsequent "challenge" oral infection than in the controls. In experiments on the destruction of *Limnaea caillaudi*, the carrier of Fasciola in East Africa, malachite was used in "brick" form, which proved far easier to handle than the powder; successful control was obtained in the laboratory but in the field a sufficient concentration of copper could not be easily maintained in slow-moving waters. The following helminths have been determined in East Africa for the first time: *Dipetalonema dracunculoides* from a dog at Isiolo, *Onchocerca armillata* from cattle from the Teso and Lango districts of Uganda, *Suifilaria suis* from a pig at Solai, and *Dicrocoelium hospes* from a sheep at Entebbe. *O. gutturosa* from Kenya cattle slaughtered at Nairobi was tentatively identified. R.T.L.

532—Research Report. Fish and Wildlife Service. U.S. Department of the Interior.

a. DAVIS, H. S., 1946.—"Care and diseases of trout." No. 12, 98 pp. [Revised edit.]

533—Revista Agricola Guatemala.

a. ESTRADA, E., 1946.—"La lombriz del pulmón en el ganado. (Bronquitis verminosa, neumonía verminosa, bronconeumonía verminosa)." 2 (15/20), 146–150.

534—Revista Argentina de Urología.

*a. MOLINA, L. R., 1946.—"Quiste hidatídico de riñón derecho." 15, 246–250.
*b. MOLINA, L. R., 1946.—"Quiste hidatídico retrovesical." 15, 251–258.

535—Revista de la Asociación Médica Argentina.

a. MÚSCOLO, D. & PIETRO, A. DI, 1946.—"Equinococosis del radio." 60 (585), 589–592.
b. CASIRAGHI, J. C., 1946.—"Hemoptisis y hemorragias en los quistes hidatídicos del pulmón." 60 (588), 773–776.
c. CALCAGNO, B. N., CASIRAGHI, J. C. & BUSCHIAZZO, A., 1946.—"Terapéutica biológica. Equinococosis ósea." 60 (594), 1026.

536—Revista Brasileira de Cirurgia.

a. FARIA, G. DE, 1946.—"Elefantíase da genitália externa masculina. Resultado da cirurgia plástica." 15 (6), 209–214.

537—Revista Brasileira de Medicina.

*a. MEIRA, J. A., 1946.—"Perturbações gerais provocadas pelo necator." 3, 57–60.
*b. ROCHA, O., 1946.—"Profilaxia da anemia ancilostomotica considerada como sindrome de carencia." 3, 77.
*c. LOPES PONTES, J. P., 1946.—"Incidência das infestações helminticas intestinais no Rio de Janeiro." 3, 180–187.

538—Revista Clínica Española.

a. RAVENTÓS MORAGAS, A., 1946.—"Quiste del cisticerco en el masetero." 20 (6), 518–520.
b. LÓPEZ-NEYRA, C. R. & GONZÁLEZ DE VEGA, N., 1946.—"Nematodes broncopulmonares humanos y clínica de las pulmobronconematoidosis." 21 (4), 304–313. [English, French & German summaries p. 313.]

539—Revista Cubana de Pediatría.

a. NOGUEIRA, P., 1946.—"La campaña contra el parasitismo intestinal es ya una realidad." 18 (12), 749–755.

540—Revista Española de Cirugía, Traumatología y Ortopedia.

a. PERERA, A., 1946.—"Quistes hidatídicos del pulmón y su tratamiento quirúrgico." 4 (21), 183–193.
b. LORENZO FERNÁNDEZ, T. & PURSELL MÉNGUEZ, A., 1946.—"Consideraciones sobre el tratamiento de los quistes hidatídicos de pulmón." 4 (22), 243–255.

541—Revista Española de Obstetricia y Ginecología.

*a. HORNO LIRIA, R., 1946.—"Equinococosis y embarazo (a propósito de un caso de coexistencia de ambos procesos)." 4, 38–43.
*b. BECERRO BENITO, M. & FERREIRA GÓMEZ, A., 1946.—"Una localización rara de equinococosis genital femenina: quistes hidatídicos múltiples en el espesor del músculo uterino." 4, 251–265.

542—Revista Ganadera Habana.

*a. SQUILLA, N., 1946.—"Parásitos internos del ganado." 15 (10), 22, 42.

543—Revista de Ginecologia e d'Obstetricia.

*a. JUNQUEIRA, M. A., 1946.—"Comprometimento do aparelho genital na esquistosomose de Manson." Year 1946, 2, 366–376.

544—Revista Ibérica de Parasitología.

a. LÓPEZ-NEYRA, C. R., 1946.—"Compendio de helmintología ibérica." 6 (1 2), 3–50.
b. LÓPEZ-NEYRA, C. R. & GONZÁLEZ DE VEGA, N., 1946.—"Las broncopulmonematosis en general y humanas en especial." 6 (3), 177–202. [English summary p. 199.]
c. JORDANO BAREA, D., 1946.—"Primeros casos de conjunctivitis verminosa en terneros debidos a la *Thelazia rhodesi* (Desmarest, 1827)." 6 (3), 239–244. [English summary p. 242.]
d. LÓPEZ-NEYRA, C. R., 1946.—"*Parahistiostrongylus viguerasi* sp.n. Trichostrongylidae, nuevo de quirópteros en España." 6 (3), 245–256. [English summary p. 253.]
e. LÓPEZ-NEYRA, C. R., 1946.—"Compendio de helmintología ibérica. (Continuación)." 6 (3), 257–267; (4), 343–377.
f. LÓPEZ-NEYRA, C. R., 1946.—"*Subulura baylisi* nom. nov. para *Subulura coturnicis* López-Neyra 1945 nec Yamaguti 1941." 6 (4), 383.

(544c) *Thelazia rhodesii* was found to be the cause of an outbreak of conjunctivitis in half a dozen calves of a herd in Lora del Rio, Seville. The parasites are compared in a table with the descriptions of Sprehn and of Yamaguti, and with *T. gulosa* and *T. alfortiensis* found in France. Adult cattle were not affected in the present outbreak, which was confined to unweaned calves. E.M.S.

(544d) Specimens of Trichostrongylidae collected from the small intestine of *Myotis myotis* in Balsain, Segovia, proved to belong to a new species now described as *Parahistiostrongylus viguerasi* n.sp. López-Neyra discusses the taxonomy of the species so far described from Cheiroptera, and concludes that *Molinostrongylus heydoni* (Baylis) is a synonym of *M. ornatus*. A table compares the new species with three other species recorded in Europe, namely *M. skrjabini*, *M. alatus*, and *Strongylus tipula* v. Ben. E.M.S.

(544f) The name *Subulura coturnicis*, given by López-Neyra in 1945 to a new species described from *Coturnix coturnix* [for abstract see Helm. Abs., Vol. XIV, No. 486c], had been previously used by Yamaguti for a species in *C. c. japonica* [see Helm. Abs., Vol. X, No. 72e]. Baylis having pointed this out, López-Neyra now proposes to call his species *S. baylisi* nom. nov. E.M.S.

545—Revista Médica Brasileira.

a. SALIM MANSUR, E., 1946.—"Contribuição ao diagnóstico da doença de Manson-Pirajá da Silva." 20 (6), 519–529. [English summary p. 529.]

546—Revista Médica de Chile.

a. ASENJO, A. & ROCCA, E. D., 1946.—"Compromiso de los pares craneanos en la cisticercosis cerebral." **74** (9), 605–615. [Discussion p. 615.]

547—Revista Médica del Hospital Español, Buenos Aires.

*a. PECO, G., PASTORINO, J. C. & GARIBOTTO, R. C., 1946.—"La sensibilización activa por inyecciones intradérmicas de pequeñas dosis de antígeno hidatídico." **16**, 4–8.

548—Revista Médica de Rosario.

*a. JORGE FANTONI, V., 1946.—"Parasitosis por *Strongyloides estercoralis*, *Necator americanus* o *Ancylostoma duodenale*; su diferenciación coprológica por el estudio de las características biológicas y morfológicas." **36**, 61–81.

*b. JORGE FANTONI, V., 1946.—"La eosinofilia en el contenido de los apéndices en las oxiurosis apendiculares." **36**, 127–149.

*c. JORGE FANTONI, V., 1946.—"Estudio experimental de algunos factores que pueden influenciar el desarrollo de los huevos de *Ascaris lumbricoides* en nuestro medio." **36**, 442–456.

549—Revista Médica de Yucatán.

a. SANTOS ZETINA, F., 1946.—"El vital problema sanitario de la Zona Henequenera." **23** (12), 523–526.

(549a) [This article has also appeared in *Medicina, Rev. mex.*, 1946, **26** (513), 336–339. For abstract see above, No. 473a.]

550—Revista de Medicina. São Paulo.

*a. HERMETO, Jr., S., 1946.—"Esplenomegalia e ascite por esquistosomose: operação de Talma-Drummond, e posteriormente esplenectomia." **30**, 217–234.

551—Revista de Medicina Experimental. Lima.

*a. AYULO ROBLES, V. M., 1946.—"Survey parasitológico en Satipo." **5** (1/4), 86–101.

552—Revista de Medicina do Rio Grande do Sul. Pôrto Alegre.

*a. RANGEL BALLVÉ, M., 1946.—"Quisto hidático supurado do corpo do pâncreas." **2**, 207–217.

553—Revistă de Medicina Veterinaria. Bogotá.

a. LA TORRE MONTOYA, A. DE, 1946.—"La fenotiacina en el tratamiento de la bronquitis verminosa de los bovinos." **15** (91), 81–96.

(553a) Verminous bronchitis in calves was treated by the intratracheal instillation or injection of a suspension containing 20 gm. of phenothiazine per 100 c.c., in equal parts of alcohol and glycerin. Doses were 3–5 c.c. of the mixture for 6-month-old calves, 10 c.c. from 6 months to a year, and 20 c.c. for adults. Results are claimed to be better than those recorded for other medicaments. E.M.S.

554—Revista de Medicina Veterinaria. Buenos Aires.

a. ROBBIO, H. I., 1946.—"A propósito de un ataque epileptiforme reflejo de origen parasitario." Year 1945–46, **27/28**, 320–326.

555—Revista de Medicina Veterinária. Lisbon.

a. SILVA LEITÃO, 1946.—"Parasitologia prática." **41** (316), 102–103.

b. SILVA LEITÃO, 1946.—"Protostrongilose bronco-pulmonar dos ovinos e caprinos portugueses." **41** (317), 200–208. [English & French summaries p. 207.]

c. BRITO GUTTERRES, J. DE, 1946.—"Un nouveau nématode parasite du duodenum du mouton." **41** (319), 431–435.

(555b) In Portugal protostrongylosis is a common infection of sheep and goats. The lungs of 3,200 sheep and 1,510 goats were condemned in abattoirs in 1942, chiefly for Dictyocaulus infection. R.T.L.

(555c) Severe and often fatal gastro-intestinal symptoms due to *Gaigeria ullissiponensis* n.sp. occurred in sheep at Kansénia, Belgian Congo. The new species is characterized by its size (male 17–21 mm., female 22–25 mm.), absence of visible cervical papillae, and the peculiar conformation of the dorsal lobe of the bursa. R.T.L.

556—Revista de Medicina Veterinaria y Parasitología. Caracas.

a. VOGELSANG, E. G., 1946.—"Triquinosis en Venezuela." 5 (1), 53–55.

(556a) *Trichinella spiralis* was not found in any of 2,000 pigs and 800 rats examined from various localities in Venezuela. E.M.S.

557—Revista Médico-Quirurgica de Oriente. Santiago de Cuba.

a. LÓPEZ-CHÁVEZ G., J., 1946.—"Frecuencia, diagnostico y tratamiento del *Strongyloides stercoralis*." 7 (3), 159–166.

(557a) López-Chávez G. gives a general account of strongyloidiasis in man, and describes his experiences with gentian violet intravenously and orally. E.M.S.

558—Revista Médico-Quirúrgica de Patología Femenina.

a. DÍAZ COLODRERO, A. A. & MARRUGAT, O. L., 1946.—"Quiste hidatídico de riñón." 25 (2), 120–127.
b. BAZTERRICA, E., KANTT, J. & GOÑI, A. G., 1946.—"Quiste hidatídico de hígado y litiasis vesicular." 25 (4), 237–240.
c. OBARRIO, J. M. & OBARRIO (h.), J. M., 1946.—"Confusión mental por quiste de hígado supurado." 25 (8), 428–432.

559—Revista Mensual. Asociación Rural del Uruguay.

a. ALMADA PIRIZ, J. C., 1946.—"La lombriz pulmonar de los ovinos." 73 (11), 10–11.

560—Revista Mexicana de Cirugía, Ginecología y Cáncer.

*a. BENITEZ SOTO, L., 1946.—"Datos históricos de la oncocercosis en México a través de la literatura respectiva." 14 (6), 171–192.

561—Revista Mexicana de Medicina Veterinaria y Zootecnia.

a. CHAVARRÍA CH., M. & TÉLLEZ, A. A., 1946.—"Filarosis de los animales domésticos de México." 4 (1), 17–21.

562—Revista Mexicana de Tuberculosis y Enfermedades del Aparato Respiratorio.

*a. BUENO, M. M., 1946.—"Distomatosis y tuberculosis pulmonar." 8, 99–107.

563—Revista. Ministerio de Agricultura, Comercio y Trabajo, Cuba.

*a. CORTIZO, J. M., 1946.—"La presencia en Cuba del *Trichuris discolor* (von Linstow, 1906)." Ser. 4, 29 (2), 65.

564—Revista Paulista de Medicina.

a. SACRAMENTO, W. & ROMEIRO NETTO, M. M., 1946.—"Considerações sôbre parasitoses e distúrbios intestinais." 29 (3), 189–200. [English summary p. 199.]
*b. MONTENEGRO, J., 1946.—"Cegueira produzida por cisticercose cerebral." 29, 348–356.

(564a) Among 500 members of a hospital staff in São Paulo, helminthiasis was much less frequent than has usually been reported for Brazil. The helminths most frequently found were *Necator americanus* in 11·8%, *Ascaris lumbricoides* in 3·2% and *Strongyloides stercoralis* in 2·8%. Intestinal disturbances could not be correlated with parasitism and are probably caused by faulty diet. E.M.S.

565—Revista de la Policlínica Caracas.

a. VAN DER SAR, A. & HARTZ, P. H., 1946.—"El síndrome eosinofilia tropical y microfilaria. (Informe de un nuevo caso.)" 15 (88), 183–188. [English summary p. 187.]
b. JAFFÉ, R. & FERRO, R., 1946.—"El diagnóstico de la bilharzia en el material de autopsia." 15 (88), 189–194.

(565b) Chemical and histological methods gave similar results in the examination of 86 cadavers at the Hospital Vargas for *Schistosoma mansoni*. The chemical method proved superior for rectal tissue: both methods in conjunction gave an incidence of 36%. E.M.S.

566—Revista de Sanidad e Higiene Pública, Madrid.

a. ORTIZ-PICÓN, J. M., 1946.—"Contribución al estudio de la reacción tisular del organismo huésped ante el parásito. Vermes intrarrenales e hiperplasia atípica del epitelio de los tubuli en un urodelo." 20, 22–24.

(566a) Ortiz-Picón describes an atypical epithelial proliferation observed in the kidney of *Pleurodeles waltl*, apparently caused by the presence of nematode larvae. The possible mechanism of cancer formation initiated by the presence of the parasite is discussed. E.M.S.

567—Revista de la Sanidad Militar. Buenos Aires.

a. NOTTI, P. & VOLPI, J. P., 1946.—"Hidatidosis en Cuyo." 45 (4), 487–497.

(567a) Four cases of hyatid disease were found among 1,648 patients at the military hospital in Mendoza during 1944 and 1945. Past records of the disease in the province are tabulated, and it is considered to be of relatively high incidence. E.M.S.

568—Revista de la Sanidad de Policía. Lima.

*a. INDACOCHEA, A., 1946.—"Quiste hidático del pulmón." 6, 17–29.
*b. LOZADA, G., 1946.—"A propósito de un caso de equinococosis peritoneal." 6, 115–121.

569—Revista de la Sociedad Malacológica "Carlos de la Torre".

a. KOURÍ, P., 1946.—"El hallazgo de furcocercarias en *Drepanotrema lucidum*. Nota previa." 4 (3), 93–94.

(569a) Kourí found furcocercariae smaller than those of *Schistosoma mansoni* and apparently distinct, in three of 117 examples of *Drepanotrema lucidum* examined in Pinar del Río, Cuba. E.M.S.

570—Revista Stiintelor Medicale.

a. AGAVRILOAE, A., 1946.—"Consideratiuni asupra unui caz de *Filaria bancrofti*." 35 (9/12), 719–727. [French summary p. 727.]

(570a) Microfilariae of *Wuchereria bancrofti* are reported in the urine and blood of a Russian airman garrisoned in Rumania. He had previously been stationed in Manchuria. E.M.S.

571—Revista Sudamericana de Morfología. Buenos Aires.

*a. POTENZA, L., 1946.—"Peritonitis nodular en casos de ileitis schistosomiásica (mansoni), simulando tuberculosis." 4, 208–216.

572—Revue Belge des Sciences Médicales.

a. KETELSLEGERS, J., 1946.—"L'appendicite vermineuse par oxyures." 17 (5), 295–314.

573—Revue du Foie. Paris.

*a. COMMÉNY, H., DRIEUX, H. & VERGE, J., 1946.—"Hépatologie comparée; ascaridiose hépatique chez un porcelet." 5 (4), 247–251.

574—Revue de Médecine Navale. Paris.

a. GÉRARD, R., 1946.—"Petite épidémie de trichinose en Algérie." 1 (4), 353–362.

(574a) Gérard describes typical symptoms of trichinelliasis observed in 13 patients widely scattered in the neighbourhood of Algiers, all of whom were found to have consumed raw pork from the same pig. Most of the patients were women who had been concerned in preparing the pork. Most of the patients, but none of several controls, showed urticaria when subjected to a skin test with a glycerin-serum extract of the suspected pork. Eosinophilia up to 16% was observed. The disease was not diagnosed at the time of the outbreak, and no search was made for trichinae in the pork. E.M.S.

575—Revue de Médecine Vétérinaire. Lyon et Toulouse.

a. VAILLS, L., 1946.—"Microfilaires et dermatose estivale récidivante du cheval." 97, 65–72.
b. ROSSI, P., 1946.—"La distomatose humaine à *Fasciola hepatica*." 97, 149–166, 219–227.
c. CALLOT, J. & GAYOT, G., 1946.—"Etude expérimentale de la survie de *Fasciola hepatica*." 97, 249–250.

(575a) A prurigenous dermatitis occurs during May to September in 5–8% of horses on the Mediterranean coast of France. The lesions do not resemble those due to habronemiasis. Seeing analogies with those associated in dogs with *Dirofilaria immitis*, Vaills is led to conclude that aggregations of *Setaria equina* embryos are the probable cause. This hypothesis is supported by the finding of *S. equina* in the vaginal wall of affected horses operated on for strangulated hernia, and by the finding of microfilariae in the jugular blood of 6 out of 32 affected horses. On ecological grounds only, he regards a species of the chironomid genus *Microconops* as the probable vector. R.T.L.

(575b) Rossi briefly notes the known geographical distribution of human cases of infection with *Fasciola hepatica* and reports its occurrence in all five members of a French family. There follows a critical discussion of the views of various authors on the symptomatology, haematology, pathological anatomy, diagnosis, longevity of infection, treatment and prophylaxis of this infection in man. A useful bibliography is appended. R.T.L.

(575c) Callot & Gayot found that *Fasciola hepatica* died within seven hours when kept in fragments of beef liver under natural conditions. They consider it impossible for the fluke to be disseminated by consumption of infected liver or liver products. E.M.S.

576—Revue Médicale du Moyen-Orient.

*a. MERAB, A. J., 1946.—"Présentation de deux cas d'anasarque dus vraisemblablement a des Ascarides." 4, 421–423.
*b. RIZK, E. A., 1946.—"Faune parasitologique intestinale au Liban (étude de 6,100 analyses coprologiques)." 4, 480–490.

577—Revue Médicale de Nancy.

*a. LEDOUX, A., 1946.—"Hépatite fébrile éosinophilique ; distomatose hépatique probable." 71, 127–129.

578—Revue de Pathologie Comparée et d'Hygiène Générale.

a. FONCIN, R., 1946.—"Traitement de l'oxyurose par la phénothiazine." 46 (571/572), 280–283.

(578a) Foncin has treated 30 cases of enterobiasis in adults and children with phenothiazine. The daily dose given for seven consecutive days was 6 gm. for adolescents and adults, 4 gm. for those of 8–12 years, 2 gm. for 4–8 years, and 1 gm. for 1–4 years. The only pathological effect noted was icterus in three instances. Worms and eggs disappeared in all the cases. The total doses can, however, be reduced to 9 gm. given over

a period of three days for an adult, 1·5 gm. for children up to 2 years of age, 3 gm. for those 2–4 years old, and 6 gm. for those between 4 and 12 years old. At these rates there is a wide margin of safety. R.T.L.

579—Revue Scientifique. Paris.

a. BAER, J. G., 1946.—" La signification des générations larvaires chez les vers plats parasites." 84 (3257), 263–272.

(579a) After outlining the forms of life-cycle so far known among the trematodes and cestodes, Baer discusses the degree to which these are determined by the parasitic mode of life and the degree to which they can give reliable evidence of phylogenetic relationships. Finally he sets the time of appearance of parasitic cestodes in the Mesozoic, and of parasitic trematodes in the Tertiary periods. E.M.S.

580—Revue de la Tuberculose.

a. RIVOLLIER, P., 1946.—" Kyste hydatique du poumon guéri par élimination spontanée de la membrane kystique." 5e Série, 10 (7/8), 454–456.

581—Rhodesia Agricultural Journal.

a. LAWRENCE, D. A., 1946.—" Carbon tetrachloride for the treatment of liver fluke and hook-worm." 43 (5), 396–398. [Issued separately as *Bull. Min. Agric. S. Rhod.*, No. 1362.]
b. BROWN, D. D., 1946.—" The culture of Virginia type tobacco in Southern Rhodesia. Field operations." 43 (5), 436–451.

(581a) [This paper was originally published in *Rhod. agric. J.*, 1944, 41 (6), 383–384. For abstract see Helm. Abs., Vol. XIII, No. 281a.]

(581b) Owing to the serious incidence of *Heterodera marioni* in tobacco in Southern Rhodesia, it is advised that the choice of legumes and other crops used in rotation with tobacco should be restricted to those varieties resistant to eelworm attack. The list of suggested plants is cited from Collins [see Helm. Abs., Vol. VI, No. 646b]. According to Jack [see Helm. Abs., Vol. XIV, No. 463a], a local variety of cotton (9L34) is highly resistant to *H. marioni*. R.T.L.

582—Riforma Medica.

a. MARTINI, D., 1946.—" Sulle cisti da echinococco dell'appendice vermiforme." 60 (33/34), 446–448.

583—Rivista di Clinica Pediatrica.

a. AVERSA, T., 1946.—" Contributo alla conoscenza delle alterazioni ematologiche nell'anchilostomiasi dell'infanzia." 44, 193–206. [English & French summaries pp. 205–206.]

584—Rivista di Oftalmologia. Florence.

*a. LONGHENA, L., 1946.—" Due casi di cisticercosi endoculare." 1, 94–109.

585—Rod and Gun in Canada.

*a. CAMERON, T. W. M., 1946.—" Black spot and yellow grub in fish." 48 (5), 12–15.

(585a) Cameron gives an illustrated account of the life-histories of the trematodes which cause "black spot" and "yellow grub" in fishes in Canada. The belted kingfisher is the definitive host of *Uvulifer ambloplites*, which has in Canada *Helisoma anceps* and in the U.S.A. *H. trivolvis* as first intermediate hosts ; the cercariae encyst in the bass causing "black spot". The belted kingfisher is definitive host also for *Crassiphiala bulboglossa* of which the intermediate host is not yet determined ; the cercariae encyst in perch and pike causing "black spot". The loon is definitive host for *Apophallus brevis* which develops

in *Amnicola limosa* and causes "black spot" by encysting in speckled trout. The great blue heron is definitive host for *Clinostomum marginatum*, which as intermediate host has *Helisoma trivolvis* in Canada and *H. antrosum* in U.S.A. ; the encysted cercariae cause "yellow grub" in freshwater fish in the Old World as well as in North America. R.T.L.

586—Schriften der Schweizerischen Vereinigung für Tierzucht.

a. SCHMID, G., 1946.—"Wurmkrankheiten bei Ziegen und Schafen." [Vortrag an der Tagung der Schweizerischen Vereinigung für Tierzucht vom 30. März 1946 in Thun.] No. 8, pp. 33–40.

(586a) Schmid gives a list, with brief comments, of 20 of the chief helminths found in sheep and goats. It is presumably based on findings in Switzerland. R.T.L.

587—Schweizer Archiv für Tierheilkunde.

a. ANON., 1946.—"Rezepturpflicht für Phenothiazin." **88** (1), 53.
b. BENOIT, R., 1946.—"Contribution à l'étude de l'echinococcose." **88** (9), 446–451.

(587a) The Directors of the Federal Veterinary Office and the Federal Health Office have issued a circular concerning the use of phenothiazine as a veterinary anthelmintic. It is considered that the drug should be administered only after diagnosis of nematode infestation and by or under the instructions of a veterinarian. It is recommended that the drug should not be sold to the public except on prescription. E.M.S.

(587b) Hydatids occurred in the liver in 1·8% of horses slaughtered in the abattoirs of Lausanne. The infection was especially notable in those coming from the French and Vaud regions of the Jura. R.T.L.

588—Schweizerische Zeitschrift für Pathologie und Bakteriologie.

a. BAER, J. G. & SCHEIDEGGER, S., 1946.—"Un cas intéressant de tétraplégie d'origine parasitaire." **9** (1), 61–66. [English, German & Italian summaries pp. 65–66.]

(588a) Parasitic masses which proved to be *Cysticercus longicollis* were found post mortem in the pectoral and psoas muscles, the retro-peritoneal tissues and the vertebral canal of a cercopithecus monkey affected with tetraplegia. The monkey had been living with two foxes in the zoological garden at Basle. E.M.S.

589—Scientific Monthly. New York.

a. BARTSCH, P., 1946.—"The human blood flukes." **63** (5), 381–390.

(589a) Bartsch draws attention to the close correlation between the alkalinity of waters and the abundance of the molluscan carriers of *Schistosoma mansoni* in the West Indies. In Guadeloupe *Australorbis guadeloupensis* occurs in great abundance, not on Basse-Terre but on Grande-Terre which is an elevated limestone mass. It is also abundant on Grenada, St. Christopher (St. Kitts), Jamaica, Haiti, Dominican Republic, Puerto Rico, Culebra, Nevis, Montserrat, Antigua, Marie-Galante, Martinique and Trinidad. On Grenada the soil is non-calcareous except on a coastal strip representing an elevated coral reef on the Atlantic side, and here only were *Australorbis* spp. present ; the mountain streams were acid in reaction and therefore unsuitable for molluscs. A similar set of conditions was noticed in Trinidad. As the intermediate hosts of *Schistosoma haematobium* and *S. japonicum* require a slightly acid environment, Bartsch suggests their control by the scattering of crushed limestone. Owing to their addiction to alkaline waters the control of the carriers of *S. mansoni* presents a more difficult problem, although copper salts have been used with some success. R.T.L.

590—Scottish Farmer.

a. MORGAN, D. O., 1946.—"Helminths in sheep. Observations on hill flocks in Ettrick." 54 (2820), 1343.

(590a) In a general review of helminthiasis in sheep, Morgan refers particularly to the results of a study of worms in hill sheep in the Border districts of Scotland. He points out that although the stocking on a hill may be very light, heavy infestations occur particularly in young sheep. The sharp increase in the worm egg output which was found to occur in the spring is discussed and it is suggested that a programme of dosing for hill sheep, based on these findings, should be put to experimental test. D.O.M.

591—Semana Médica. Buenos Aires.

a. GRINBLAT, S., 1946.—"Tratamiento antihelmíntico por vía transduodenal." [Abstract.] Año 53, 1 (2725), 623–624.
b. PARODI, S. E. & ALCARAZ, R. A., 1946.—"Sobre el movimiento de los ganchos pertenecientes a los embriones de los cestodes." Año 53, 1 (2729), 806.
c. VON DER BECKE, A., 1946.—"Sobre la histología patólogica de las apendicitis a *Enterobius vermicularis*." Año 53, 2 (2738), 15–23.
d. PARODI, S. E. & ALCARAZ, R. A., 1946.—"Patogenia de la anemia en la ancylostomiasis y necatoriasis." Año 53, 2 (2740), 116–118.

(591b) From a study of numerous living hexacanth embryos of *Multiceps serialis* and *Hymenolepis diminuta*, Parodi & Alcaraz describe the movements of the embryo hooklets. The median pair are especially active and it is suggested that these movements liberate the embryo, rather than the action of digestive juices. E.M.S.

592—Sheep and Goat Raiser.

*a. BOUGHTON, I. B., 1946.—"A test of phenothiazine-salt mixture." 27 (3), 26–27.

593—Sillon Belge.

*a. ENCE, 1946.—"La bronchite vermineuse des ruminants." 15 (227), 7.

594—Sind Medical Journal.

a. HODGE, E. H. V., 1946.—"Intestinal infestations." 19 (1), 24–35.

(594a) [This paper has been reprinted from the *Practitioner*, 1945, **155**, pp. 306–312.]

595—Skandinavisk Veterinär-Tidskrift.

a. KOFFMAN, M., 1946.—"Bidrag till kännedomen om lungparasiten *Dictyocaulus viviparus*." 36 (12), 718–731. [English summary p. 731.]

(595a) The morphology, pathogenicity, life-cycle and known methods of control of *Dictyocaulus viviparus* are described. R.T.L.

596—South African Engineer.

a. CAWSTON, F. G., 1946.—"Mechanical safeguard against Bilharzia. Destroying the parasites." 36 (334), 26, 28.

(596a) [This paper is reprinted in *J. R. Army med. Cps*, 1946, 87 (4), 177–179. For abstract see Helm. Abs., Vol. XV, No. 214a.]

597—Southern Medical Journal.

a. HAILEY, H., 1946.—"Treatment of creeping eruption (larva migran)." 39 (5), 371–372. [Discussion pp. 372–375.]
b. BLACK, T. C., 1946.—"Coexistent hookworm and tuberculosis." 39 (11), 881–884.

c. MARTIN, W. B., GRAZIANI, J. G., COLLINS, J. & LINCICUM, D. R., 1946.—" Chronic infestation with intestinal parasites in an engineer battalion with particular reference to *Schistosoma japonicum*." **39** (11), 885–888.

(597a) Although Fouadin has apparently solved the problem of treating creeping eruption due to hookworm larvae, the author has found that poulticing for 3–7 nights with large white onion, grated coarsely, cured his four patients. The method is painless and cheap. The only disadvantages are the odour and the time taken in the preparation of the poultices. R.T.L.

598—Southern Seedsman. Texas.

a. TAYLOR, A. L., 1946.—" You can control root-knot nematode. How to help your customers solve an all-important garden problem." **9** (11), 16, 42, 46.

(598a) In a popular article Taylor says that root-knot in southern U.S.A. gardens can definitely be controlled. The cheapest way is by bare fallow for two years or by growing *Crotalaria* as an immune cover crop. A more expensive but quicker and easier method is by means of chemical treatment : chloropicrin, mixtures containing methyl bromide or ethylene dibromide, or D-D mixture have all been thoroughly tested and found suitable. M.T.F.

599—Station Bulletin. Oregon Agricultural Experiment Station.

a. SHAW, J. N. & MUTH, O. H., 1946.—" Studies of parasites in Oregon sheep on irrigated pastures." No. 440, 19 pp.

(599a) On irrigated ladino clover pasture, with wheat and barley supplements, only 18 out of 142 lambs became fat in 108 days. Seventeen died from parasitism, chiefly from infection with *Ostertagia circumcincta* and trichostrongyle species. Symptoms did not develop where mixtures of phenothiazine and salt 1 : 15 and 1 : 10 were supplied but treatment was unsuccessful if given after symptoms had appeared. These mixtures did not destroy or prevent parasitism. These studies are in continuation of those reported in 1942 [see Helm. Abs., Vol. XI, No. 48a]. R.T.L.

600—Stock and Land. Melbourne.

*a. GORRIE, C. J. R., 1946.—" Phenothiazine not complete answer to calf worm." **36** (45), 7.

601—Süddeutsche Apothekerzeitung.

*a. MERZ, K. W., 1946.—" Welche Wurmmittel stehen heute noch zur Verfügung ? " Year 1946, No. 4, p. 77.

602—Sugar Beet. Ogden, Utah.

a. SMITH, D. E., 1946.—" Soil fumigation for control of root nematode in sugar beets." **6** (5), 16–19, 26.

(602a) D-D gave satisfactory control of sugar-beet eelworm and other soil pests in a sandy soil when used at 200 lb. per acre. Autumn application is recommended to avoid delay of spring sowing operations. E.M.S.

603—Sun-up.

*a. TAYLOR, A. L., 1946.—" Death to nematodes ; new research controls the South's major soil scourge." **1** (10), 16–17.

(603a) [This is the same article as appeared in *Southern Seedsman*, 1946, 9 (11), 16, 42, 46. For abstract, see above, No. 598a.]

604—Suomen Eläinlääkärilehti. (Finsk Veterinärtidskrift.)

*a. SARKKILA, A., 1946.—"Onchocerca cervicaliksesta ja sen esiintymisestä suomalaisen hevosen niskajänteessä." 52, 213–226. [Swedish summary.]

605—Tasmanian Journal of Agriculture.

a. SCOTT, R. A., 1946.—"Some treatments for seed potatoes." 17 (2), 229–234.
b. RYAN, A. F., 1946.—"Some parasites of pigs." 17 (2), 245–247.
c. GREEN, R. J., 1946.—"Internal parasites of sheep." 17 (4), 313–318.

(605a) Hot-water treatment of seed potatoes infected with *Heterodera marioni* is advocated as a precautionary measure in Tasmania for nuclear stocks being introduced into clean seed potato areas, but it is not advocated when clean healthy seed is available. A large volume of water should be used. The quantity of potatoes treated should be regulated so that the temperature can be maintained at 125°F. for 14 minutes without falling more than one degree. The tubers should be dormant when treated and the treated seed should be planted in clean land or land bare-fallowed for two years. R.T.L.

(605b) In Tasmania the most common helminths encountered in pigs are *Ascaris* and *Macracanthorhynchus*. The intermediary of the latter is a beetle belonging to the family Scarabaeidae. R.T.L.

(605c) In Tasmania *Haemonchus contortus* is of importance as a sheep parasite on King and Flinders Islands and on the East Coast. *Chabertia ovina* is not uncommon. *Bunostomum* sp. occurs infrequently. *Trichostrongylus* spp. are the most dangerous parasites present. Other nematodes mentioned are *Oesophagostomum venulosum*, *Trichuris* sp., *Nematodirus* sp., *Cooperia* sp., *Ostertagia* sp., *Muellerius* sp. and *Dictyocaulus* sp. Their prevention and treatment are dealt with on accepted lines. R.T.L.

606—Tijdschrift voor Diergeneeskunde.

a. HUMMELINCK, P. W., 1946.—"Onderzoekingen over de ontwikkelingssnelheid van eieren en larven van paardenstrongyliden." 71 (21), 842–852. [English & German summaries pp. 844–845.]

(606a) Strongylid eggs in horse faeces develop most rapidly at 35°C., the final larval stage being reached in ten hours. At 40°C. development is arrested and at low temperatures is much retarded. At 3°C. development ceases; at 8°C. the first larval stage is not reached until the 12th day, and at 18°C. in about 1½ days. The relative speed of development of the various larval stages is strikingly similar. R.T.L.

607—Transactions of the Association of American Physicians.

a. THOMAS, Jr., H. M., BRACKEN, M. M. & BANG, F. B., 1946.—"The clinical and pathological picture of early acute schistosomiasis japonica." 59, 75–80. [Discussion pp. 80–81.]

608—Transactions of the Illinois Academy of Science.

a. WALTON, A. C., 1946.—"Parasites of Amphibia. Bufonidae: Procoela: Salientia. I." Year 1945, 38, 113–116.
b. WEBB, R. J. & LEWIS, J. M., 1946.—"Phenothiazine-salt mixtures as an anthelmintic for sheep." Year 1945, 38, 117–126.

(608b) Webb & Lewis have extended the work reported by Peterson, Kammlade & Webb [see Helm. Abs., Vol. XIII, No. 6g], in order to compare the efficacy and palatability for sheep of 1 : 9 and 1 : 14 phenothiazine-salt mixtures. When the 1 : 9 mixture was offered alone or when free choice was given of the two mixtures, sheep consumed more phenothiazine as 1 : 9 mixture than as 1 : 14 mixture, but the amount was insufficient to protect them on pasture recently heavily contaminated. E.M.S.

609—Transactions of the Royal Society of South Australia.

a. JOHNSTON, T. H. & BECKWITH, A. C., 1946.—"The life cycle of the sheep liver fluke in South Australia." 70 (1), 121–126.

(609a) *Fasciola hepatica* is not common in South Australia but has a fairly wide distribution in the south-east. The earlier observations on the determination of the intermediate host in eastern Australia and the taxonomy of the molluscs examined and incriminated are reviewed. *Limnaea* (now *Simlimnaea*) *brazieri* is the intermediate host in New South Wales and probably in Victoria and Tasmania, although the taxonomy of the smaller limnaeid snails in the latter states is by no means settled. The authors have shown that the intermediate host in South Australia is *S. subaquatilis*, one of the smaller limnaeids closely resembling *S. brazieri*. Attempts to infect *Amerianna* spp. and *Limnaea lessoni* were unsuccessful. Four other species of cercariae were recorded from *S. subaquatilis*, two being furcocercariae belonging to the Strigeida, the third being *C. parocellata*, a schistosome, and the fourth *C. ellisi*, an echinostome. Experimental infections of *S. subaquatilis* were carried out in the laboratory and the cercariae of *F. hepatica* were fed to rabbits from which adult flukes were recovered. In one instance adult flukes were produced 69 days after the ingestion of encysted cercariae, a shorter period than that generally accepted. H.MCL.G.

610—Transactions of the Zoological Society of London.

a. SPROSTON, N. G., 1946.—"A synopsis of the monogenetic trematodes." 25 (4), 185–600.

(610a) In this monograph of 416 pages, Sproston gives a systematic account of the known Monogenea of which she recognizes 18 families and 130 genera. The growth of our knowledge of the group is shown by the fact that since Stiles & Hassall's list was issued in 1908, 77 valid new genera and 481 valid new species have been published. This vast material is treated critically. There are extensive lists of synonyms of which the taxonomic history is briefly traced. Keys for the differentiation of the various families, subfamilies and genera are provided. The species are not described but are listed with the relevant bibliographical references. The parasites are also arranged in a host list. A special section deals with the species and their hosts collected in British waters. The text is illustrated by 118 figures. The bibliography covers 119 pages and the work concludes with an alphabetical index to the names used in the literature of Monogenea. New names include *Gyrodactylus bychowskyi* nom. nov. for *G. medius* Wegener, *Gyrodactylus* n.sp.(?) collected from *Pleuronectes platessa*; Acanthocotyloidea n.superfam.; Avielloidea n.superfam., Aviellidae n.fam., *Aviella* n.g. for *Ankyrocotyle baikalense*; *Rajonchocotyle blandae* (?)n.sp.; *Tagia* n.g. for *Heterobothrium ecuadori*, *Hemitagia* n.g. for *Heterobothrium galapagensis*; *Pyragraphorus* n.g. for *Microcotyle pyragraphorus*, *Cemocotyle* n.g. for *M. carangis*, *Axinoides* status emend. for *Axine* (*Axinoides*) and *Heteraxine* status emend. for *Axine* (*Heteraxine*) of Yamaguti, 1938, and *Lintaxine* n.g. for *Heteraxine* Linton, 1940; *Heteraxine meservei* nom.nov. for *Axine seriolae* Meserve; Gastrocotylinae n.subfam. with *Lithidiocotyle* n.g. for *Microcotyle acanthophallus*; Choricotylinae n.subfam. Trochopinae is emended to Trochopodinae, and Vallisinae to Vallisiinae. *Pseudomerizocotyle* falls as a synonym of *Thaumatocotyle*. There are numerous new combinations and emendations of specific names. R.T.L.

611—Tropical Medicine News.

a. McCOY, O. R., 1946.—"Filariasis in military personnel." 3 (2), 4–6.
b. McCOY, O. R., 1946.—"Incidence of insect-borne diseases in U.S. Army during World War II." 3 (3), 14.

(611a) Approximately 2,500 men in the U.S. Army and a somewhat larger number in the U.S. Navy became infected with filariasis while stationed in the Society, Cook and Samoan groups of islands where they lived in close association with the heavily infected

native population. The duration of their stay was relatively brief. Manifestations of infection were enlarged lymph nodes, localized painful swellings particularly of the genitalia, and a characteristic lymphangitis appearing usually in 6 months to a year, but occasionally in 3 months, after exposure to infection. These are considered to be allergic ; acute attacks lasted from a few days to two weeks and were precipitated by strenuous work. The attacks usually ceased within a few months after removal from the endemic area. Only a very few cases ever showed microfilariae in the blood. No restrictions have been placed on movement in the U.S.A., even of those harbouring microfilariae. R.T.L.

(611b) Provisional statistical reports indicate that there were 2,110 cases of filariasis (i.e. 0·09%) among U.S. Army hospital admissions during the second World War (1942–1945). They originated almost entirely in the South Pacific. R.T.L.

612 –Türk tıp Cemiyeti Mecmuası. (Bulletins de la Société Turque de Médecine.)

a. ÇAGLAR, K., 1946.—" Kolik renal arazi veren bir *Schistosoma haematobium* vak'ası." [Case of renal schistosomiasis.] 12 (2), 74–77. [Discussion pp. 75–77 ; English & French summaries in appendixes.]

b. AKSEL, A., 1946.—" Iptidaî dalak kist hidatigi." [Primary hydatid cyst of spleen.] 12 (3), 96–97. [Discussion p. 97 ; English & French summaries in appendixes.]

c. EREL, Ş. H. & TARCAN, B., 1946.—" Bir pankreas idatik kisti vak'ası." [Case of hydatid cyst of the pancreas.] 12 (10), 345–348. [Discussion p. 348 : English & French summaries in appendixes.]

613—Tuinbouwgids. Geeraardsbergen.

*a. VERSCHRAEGE, L., 1946.—" Verspreiding van het bladaaltje, *Aphelenchoides olesistus* R.B." 2 (21), 2.

614—United States Naval Medical Bulletin.

a. BENJAMIN, E. L., 1946.—" Report of two hundred necropsies on natives of Okinawa." 46 (4), 495–500.

(614a) In a study of indigenous diseases of Okinawa, microfilariae of *Wuchereria bancrofti* were found in the night blood of approximately 30% of the natives examined. The incidence of elephantiasis was low. Intestinal helminths were common : hookworm or Ascaris were found in about 50% of 200 necropsies. Only 52 *Necator americanus* and 2 *Ancylostoma duodenale* were collected from 14 cadavers. Strongyloides, Trichuris and Enterobius also occurred. R.T.L.

615—Urologic and Cutaneous Review.

a. MARTINEZ BÁEZ, M., 1946.—" Onchocerciasis." [Demonstration & discussion at Conference in Tropical Dermatology for American Doctors, Mexico City, August 6–18, 1945.] 50 (3), 151–153.

616—Växtskyddsnotiser.

a. TIHKAN, M., 1946.—" Klövernematoden bör uppmärksammas." No. 6, pp. 95–96.

(616a) Tihkan describes briefly the symptoms of *Anguillulina dipsaci* disease in red clover and emphasizes the importance of the damage done and its widespread occurrence in Sweden. He mentions that some local strains of clover show a degree of resistance to the disease and that alsike clover is less susceptible than red clover. Lucerne should be considered as an alternative to red clover. Clover sickness is the most important problem requiring investigation by the Swedish plant protection service. M.T.F.

617—Verhandlungen der Schweizerischen Naturforschenden Gesellschaft.

a. DUBOIS, G., 1946.—" Sur l'identité de *Paracoenogonimus katsuradi* Lyster, 1940 (Trematoda : Strigeida)." 126, 153–154.

(617a) A study of the original material upon which Lyster (1940) based a new species, *Paracoenogonimus katsuradi* from *Lophodytes cucullatus*, has convinced Dubois that it

is identical with *Ornithodiplostomum ptychocheilus* (Faust, 1917) Dubois, 1936. He annuls the emendations of the characters of *Paracoenogonimus* and Prohemistomatini proposed by Lyster. R.T.L.

618—Veterinariya.

a. SERGEEV, N. L., 1946.—[Concerning some complications in the anthelmintic treatment of horses with carbon tetrachloride.] 23 (7), 9–11. [In Russian.]
b. LAPIDUS, S. S., 1946.—[Practical applications of carbon tetrachloride.] 23 (8/9), 5–6. [In Russian.]
c. KAPITANAKI, M. V., 1946.—[Intravital diagnosis of Anoplocephala infestation.] 23 (8/9), 6–7. [In Russian.]
d. KORYAZHNOV, V. P., 1946.—[Trichinelliasis in the polar bear.] 23 (12), 18–19. [In Russian.]

(618a) In 1944, Sergeev treated 100 horses (5 foals and 95 adult horses) with carbon tetrachloride against strongyles. All the horses were infested with strongyles, whilst 40 had *Parascaris equorum* and 10 had *Oxyuris equi*. The dose administered was 50–60 c.c. for adult horses. This may produce oedema of the hindquarters with fever, due to the influence of carbon tetrachloride on the liver. There are sometimes increases of temperature of varying intensity and duration, thought to be connected with the disintegration of the dead worms. These complications, however, are comparatively rare and should not prejudice against the use of carbon tetrachloride as an anthelmintic in horses. C.R.

(618b) Lapidus, when treating over 30 horses with carbon tetrachloride against *Parascaris equorum*, noticed an increase of temperature after treatment. He describes three cases of treatment with carbon tetrachloride in horses with chronic equine infectious anaemia. He discusses the possibility of using this drug as a provocative agent in the diagnosis of chronic infectious anaemia. C.R.

(618c) Kapitanaki discusses the difficulties in the diagnosis of Anoplocephala in horses, and states that he obtained the best results 48 hours after treatment with carbon tetrachloride. C.R.

(618d) Koryazhnov found *Trichinella spiralis* in a polar bear, which had been only a few days in Moscow Zoopark. C.R.

619—Veterinary Student. Iowa State College.

a. TURK, R. D., 1946.—" Parasitism in calves. Reports on three recent outbreaks." 8 (4), 212–214.

(619a) Turk reports on three outbreaks of helminthiasis in calves. The first was due to heavy infestations with *Haemonchus contortus*, *Cooperia* spp. and *Bunostomum phlebotomum*. In the second and third outbreaks mortality was due to Haemonchus and Bunostomum respectively. Phenothiazine eliminated only *H. contortus*. He reports favourably on copper sulphate and nicotine sulphate solution against cooperiasis and hookworms. In one case phenothiazine administration was followed two weeks later by copper sulphate and nicotine solutions and lead arsenate tablets, and a fortnight later by 10 c.c. tetrachlorethylene in mineral oil per 100 lb. live-weight. He observes: " Frequently, alternation of anthelmintics will provide clinical results when repeated treatments with the same drug fail". P.L.leR.

620—Vida Médica. Rio de Janeiro.

*a. SOUZA LOPES, R. DE, 1946.—" Um novo meio de remover o poder tóxico dos vermífugos." 14 (4), 22–26.

621—Vrachebnoe Delo. Kharkov.

*a. KONONENKO, I. F., 1946.—" Campaign against parasitic diseases in Ukraine." 26 (5), 247–250.

622—Wiener Klinische Wochenschrift.

a. PSENNER, L., 1946.—"Zur Differentialdiagnose der Knochenechinokokkose." **58** (9/10), 155–158.
b. SCHNETZ, 1946.—"Zwei Kranke mit flüchtigen eosinophilen Lungeninfiltraten nach Askarideninfektion." [Summary of paper read at 4. Aerztlicher Seminarabend, Salzburg, March 6, 1946.] **58** (13), 218.
c. GABLER, E., 1946.—"Ein seltener Fall von *Strongyloides stercoralis* bei Ileocoecaltuberkulose und seine Therapie." **58** (34), 553–555.

(622c) Larvae of *Strongyloides stercoralis* were found in a duodenal sample taken from a patient with ileo-caecal tuberculosis. The infection resisted oral therapy, but disappeared after administration by duodenal sound of 20 minims of oil of chenopodium in 10 c.c. liquid paraffin. E.M.S.

623—Wiener Tierärztliche Monatsschrift.

a. WIRTH, D. & ZUNDL, J., 1946.—"Phenothiazin, das Mittel zur Behandlung des Strongylidenbefalles des Pferdes." **33** (9), 368–370.

624—Yale Journal of Biology and Medicine.

a. LIEBOW, A. A. & HANNUM, C. A., 1946.—"Eosinophilia, ancylostomiasis, and strongyloidosis in the South Pacific area." **18** (5), 381–403.

(624a) Eosinophilia has been shown to be closely correlated with recently acquired hookworm or Strongyloides infection in troops in South Pacific areas. Its detection has been used to investigate the epidemiology and bionomics of these infections. Peaks of eosinophilia and leucocytosis occurred 3–4 months after infection, but eosinophilia might be clinically significant up to a year later. Tetrachlorethylene treatment proved ineffective against *Ancylostoma duodenale*. E.M.S.

625—Yearbook. National Chrysanthemum Society.

a. WILSON, G. F., 1946.—"The chrysanthemum eelworm." Year 1945, pp. 17–33.
b. MOSLEY, F. O., 1946.—"A note on apparatus for warm-water treatment of stools for control of chrysanthemum eelworm." Year 1945, pp. 34–36.

(625a) Fox Wilson gives a good account of the chief signs and symptoms of disease caused by the chrysanthemum eelworm, *Aphelenchoides ritzema-bosi*. He discusses the biology of the parasite and shows that there is no significant difference between the various colour forms of chrysanthemum and their susceptibility to attack. He also describes the warm-water treatment for control of the disease. The paper is illustrated with several good drawings and photographs showing the effect of warm-water treatment and the subsequent differences exhibited by chrysanthemum varieties in the production of stem and basal shoots. T.G.

(625b) Mosley discusses the prerequisites in warm-water bath construction for control of the chrysanthemum eelworm, and then describes the chief features of the electrically heated and controlled water bath, of 45-gall. capacity, designed for the National Chrysanthemum Society. T.G.

NON-PERIODICAL LITERATURE

626—ANON., 1946.—"Sodium fluoride for removing large roundworms from swine." United States Department of Agriculture, Bureau of Animal Industry, Zoological Division, 3 pp.

Oil of chenopodium expels about 75% and phenothiazine less than 58% of roundworms from swine. The latter has proved almost as toxic as the former. Sodium fluoride is more efficacious, averaging about 95%, and compares favourably in its ease of administration, smaller bulk and cheapness, but it involves greater risk of accidental poisoning of man and animals than either phenothiazine or oil of chenopodium. The best method of treatment

is to mix one part by weight of sodium fluoride with 99 parts by weight of dry ground feed. The animals should be slightly underfed on the day before treatment. Purgation is unnecessary. R.T.L.

627—ANON., 1946.—"Controlling the large roundworm and cecal worm of chickens and turkeys." United States Department of Agriculture, Bureau of Animal Industry, Zoological Division, 2 pp.

Recent tests show that 99% of Ascaridia and Heterakis are expelled by a medicated mash consisting of 15 gm. of a 40% nicotine sulphate solution, 151 gm. of phenothiazine, 287 gm. of bentonite and 44 lb. of ordinary chick mash. When this was fed to chicks for three consecutive days, at intervals of three weeks, the level of parasitism remained low. R.T.L.

628—BRUMPT, E. & NEVEU-LEMAIRE, M., 1946.—"Travaux pratiques de parasitologie." Paris: Masson et Cie, 4th edit., vi+319 pp.

629—*CAMERON, T. W. M., 1946.—"Parasites of man in temperate climates." Toronto, 2nd edit., 215 pp.

630—COLLECTED PAPERS ON HELMINTHOLOGY DEDICATED BY HIS PUPILS TO K. I. SKRYABIN IN HIS 40TH YEAR OF SCIENTIFIC, EDUCATIONAL AND ADMINISTRATIVE ACHIEVEMENT.

a. ORBELI, L. A., 1946.—[Konstantin Ivanovich Skryabin (an appreciation).] pp. 5–6. [In Russian.]
b. ANON., 1946.—[Academician Konstantin Ivanovich Skryabin (biography).] pp. 7–20. [In Russian.]
c. ANON., 1946.—[List of genera and species of helminths found and described by Academician K. I. Skryabin.] pp. 21–26. [In Russian.]
d. ANON., 1946.—[List of genera and species of helminths described in honour of Academician K. I. Skryabin.] pp. 27–29. [In Russian.]
e. ABULADZE, K. I., 1946.—[Identification of cestodes of domestic ducks on scolex characters.] pp. 30–33. [In Russian.]
f. ANTIPIN, D. N., 1946.—[Treatment of Mesocestoides infestation in the raccoon-dog.] pp. 34–36. [In Russian.]

(630c) Skryabin had created 24 genera of trematodes, 7 of cestodes and 26 of nematodes. He had also described 58 species of trematodes, 40 of cestodes, 65 of nematodes and 3 of acanthocephalans. The present list gives the date and the host for each species. E.M.S.

(630d) His scientific colleagues in Russia and elsewhere had named in honour of Professor Skryabin 8 genera of trematodes, 2 of cestodes and 17 of nematodes. The species named after him include 18 trematodes, 11 cestodes and 37 nematodes. They are listed here with their full correct citations and hosts. E.M.S.

(630e) According to Abuladze, the simplest method of identifying tapeworms of the domestic duck is by the scolex characters. The form, measurement and number of hooks is specific for each species, and identification can be made without consideration of the anatomic structure of the proglottides. A key is included for the identification of all cestodes so far found in the domestic duck in Russia. C.R.

(630f) During a two-year survey, Antipin found that out of 90 raccoon-dogs [*Nyctereutes procyonoides*] examined in the first year, 23 (25·5%) were infested with *Mesocestoides lineatus*, and out of 127 examined in the second year, 31 (24·4%) were infested. Treatment of 30 animals with arecolin hydrobromide in various doses (0·01–0·2 gm.) showed this drug to be of little use. Kamala in doses of 5–15 gm. in 20 animals was also ineffective. Extract of male fern was given in gelatin capsules to 15 animals in doses of 2–4 c.c. and it was found that 3 c.c. gave the best results. In testing all these drugs, food was withheld for 18–20 hours before treatment. C.R.

g. AKHUMYAN, K. S., 1946.—[Systematics of the cestode genus *Catenotaenia* Janicki, 1904.] pp. 37–41. [In Russian.]
h. BASHKIROVA, E. Y., 1946.—[Two new echinostomids of birds in Azerbaijan.] pp. 42–46. [In Russian.]
i. BELOZEROVA, O. M., 1946.—[Efficacy of Soviet oil of chenopodium against ascariasis in dogs.] pp. 47–54. [In Russian.]
j. VAVILOVA, M. P., 1946.—[Influence of the diet on infestation with Hymenolepis.] pp. 55–59. [In Russian.]
k. VASILKOVA, Z. G., 1946.—[Destruction of helminth ova in sewage water used for field irrigation.] pp. 60–68. [In Russian.]
l. VINNITSKI, I. M., 1946.—[The possibility of perforation of undamaged tissues of the body by ascarids.] pp. 69–72. [In Russian.]

(630g) From a detailed study of the genus *Catenotaenia* based on material collected from rodents in Armenia during 1941 to 1943, Akhumyan makes the following changes in classification. *Catenotaenia dentritica*, *C. lobata* and *C. rhombomidis* are retained in the genus *Catenotaenia*, subfamily Taeniinae. *C. oranensis* is transferred to *Skrjabinotaenia* n.g., in which the female genital organs are situated asymmetrically and the testes lie only in the lateral fields. *C. symmetrica* is transferred to *Mathevotaenia* n.g., in which the female gonads are situated medially, and the testes laterally and posteriorly to the female gonads : a new subfamily Mathevotaeniinae n. subf., in which the uterus in an early stage of its development splits into egg capsules which are disseminated in the parenchyma of gravid segments, includes these two new genera. A detailed redescription of *M. symmetrica* is given. C.R.

(630h) Bashkirova describes *Echinostoma stromi* n.sp. from *Netta rufina*, and *E. grandis* n.sp. from *Fulica atra*. Detailed descriptions and differential diagnoses are given, with illustrations. C.R.

(630i) Belozerova tested the efficacy of three fractions of oil of chenopodium (40%, 61% and 85·8% ascaridol), produced in Soviet Russia from *Chenopodium ambrosioides*, on 100 dogs of which 78 were infested as follows : *Toxocara canis* 72·1%, *Toxascaris leonina* 7%, *Dipylidium caninum* 5% and *Uncinaria stenocephala* 3%. She found that oil of chenopodium containing 85% of ascaridol was of low toxicity and 94–100% efficacy was obtained against these parasites, with the exception of *Dipylidium caninum*. C.R.

(630j) Vavilova tested the influence of diet on infestation with *Hymenolepis nana* in rats. She kept rats on : (i) diet deprived of vitamins, (ii) diet with vitamins A and D, (iii) diet with B vitamins, (iv) protein diet and (v) control—mixed diet. After 10–15 days on these diets, the rats were given 1,500–2,500 eggs of *Hymenolepis nana*. The percentage becoming infested in each group was as follows : (i) 92% infested, (ii) 22·2% infested, (iii) 80% infested, (iv) 17·6% infested and (v) 46·4% infested. The intensity of infestation was highest in group (i) and very low in group (ii). In group (iv), on the protein diet, the mortality was 55·9%. C.R.

(630k) Vasilkova discusses the importance of the destruction of helminth ova in sewage. She suggests : (i) filtering sewage water through a sediment reservoir for about one hour at a current velocity not greater than 0.001 m. per second ; the introduction of a second sediment reservoir for refiltering of water from the first ; (ii) coagulation of sewage water in the sediment reservoir or in irrigating canals with any coagulant which would not prohibit the use of the sediment as a fertilizer ; (iii) filtering of sewage water through soil surface canals over not less than 1 km. with current velocity not more than 0·5 m. per second. The deposit from the sedimentation reservoirs and from soil surface canals can be washed out by filtering water at a greater velocity, and such water could be utilized for manuring fields growing potatoes, grass, and vegetables which are to be cooked. She considers that these methods would reduce the number of helminth eggs by 80–100%. A table showing the number of eggs of human helminths found in the sewage in Moscow is given. C.R.

(630 l) Vinnitski experimentally introduced live *Ascaris lumbricoides* into the body-cavity of guinea-pigs and a cat. Post-mortem examination after 24–72 hours showed

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m. HELLER, E. R., 1946.—[Spontaneous cure in oxyuriasis.] pp. 73–76. [In Russian.]
n. GERBILSKI, V. L., 1946.—[Inter-relationship of helminth infestations and bacterial infections.] pp. 77–84. [In Russian.]
o. GNEDINA, M. P., 1946.—[A new trematode, *Psilochasmus skrjabini* n.sp., in a water bird (*Nyroca rufa*).] pp. 85–86. [In Russian.]
p. GORSHKOV, I. P., 1946.—[Clinical study of experimental *Habronema megastoma* infestation in horses.] pp. 87–90. [In Russian.]
q. GUSHANSKAYA, L. K., 1946.—[Helminth fauna of two tetraonid birds of Siberia, *Tetrao tetrix* and *Bonasa sylvestris*.] pp. 91–95. [In Russian.]

that the worms were perforating the stomach and in some cases had passed into the alimentary canal. Penetration into the scrotum was also observed in both the cat and the guinea-pigs. C.R.

(630m) Heller, in his studies on auto-infestation in oxyurid worms, introduced rabbits which had been naturally and experimentally infected with *Passalurus ambiguus* into specially constructed cages which prevented reinfestation. Spontaneous cure occurred in the majority of the rabbits after 7–9 weeks and infestation was almost entirely eliminated in the remainder. C.R.

(630n) Gerbilski studied the possible role of the migrating larvae of *Ascaris lumbricoides* and *A. lumbricoides* var. *suum* as carriers of the bacterial flora of the intestine and of pathogenic forms in a series of experiments conducted on mice. Larvae of nematodes which mechanically injure the mucous membrane of the intestine do not inoculate ordinary bacterial flora into the organism. Larvae of ascarids can produce an infection with *Salmonella typhi-murium* from a non-infective dose. Larvae of nematodes migrating via intestine-liver-lungs can introduce pneumococci which usually do not penetrate through the intestine. C.R.

(630 o) Gnedina describes and illustrates a trematode *Psilochasmus skrjabini* n.sp. from the intestine of *Nyroca rufa*. The absence of an oesophagus separates it from any other species of *Psilochasmus*. C.R.

(630p) Infestation of foals with infective larvae of *Habronema megastoma* was characterized by the following clinical symptoms: gastritis, anaemia of mucous membranes, reduction of haemoglobin percentage and number of erythrocytes, and a periodical brief increase of temperature. The degree of clinical manifestation depends on intensity of infestation. Gastro-intestinal disturbance was manifested in variable appetite, increased peristalsis, incomplete digestion of food, particularly corn, with reduced nutritional state. The beginning of disease is connected with the penetration of infective larvae of *H. megastoma* into the mucous membrane of the stomach and is manifested clinically in the majority of infected foals by a rise of temperature on the 7th to 12th day after infestation. Change in temperature does not always depend on the condition of the animal. The higher increases of temperature (39°–40·5°C.) were recorded in most of the infested animals at the beginning of the disease on the 7th to 12th day and remained high for 2–12 days. In chronic habronemiasis there were periodical increases of temperature lasting 2–3 days at 36, 52, 62 and 122 days after infestation. There was a maximum reduction of the number of erythrocytes to 4·6 to 4·1 [millions] and of the haemoglobin to 36–37%, 52–64 days after infestation. These, however, were not characteristic and the degree of reduction was variable. In the leucocytic formula, changes were in the relation of eosinophiles and lymphocytes, and sometimes monocytes. Eosinophilia was 10·5–17%; increase of lymphocytes, up to 70% in most foals, was marked 20–22 days after infestation. In chronic habronemiasis the sedimentation rate of erythrocytes was increased up to 60–66 in the first 15 minutes, but this reaction varied. C.R.

(630q) Gushanskaya examined 24 *Tetrao tetrix* and 53 *Bonasa sylvestris* for helminth infestations. All the *Tetrao tetrix* were infested, the following worms being recorded: *Ascaridia cylindrica*, *A. magnipapilla*, *Acuaria* (*Cheilospirura*) *coturnicola*,

r. DAVTYAN, Z. A. & PANOSYAN, M. A., 1946.—[Immunity in sheep against hyperinfestation and reinfestation with *Cystocaulus nigrescens*.] pp. 96–103. [In Russian.]
s. DELAMURE, S. L., 1946.—[Nematodes from the lungs of dolphins of the Black Sea and Sea of Azov.] pp. 104–114. [In Russian.]
t. ERSHOV, V. S., 1946.—[Epizoology of *Strongylus vulgaris* in the mesenteric arteries of the horse.] pp. 115–116. [In Russian.]
u. ZAKHAROV, V. I., 1946.—[Epidemiology of Diphyllobothrium infestation in the Lake Balkhash region.] pp. 117–120. [In Russian.]
v. IVANOV, A. S., 1946.—[Helminth fauna of cyprinid fishes of the Volga delta.] pp. 121–125. [In Russian.]

Eucoleus strumosum, Oxyspirura schulzi, Rhabdometra tomica, Choanotaenia infundibulum and *Raillietina* (*Skrjabinia*) *retusa*. Of *Bonasa sylvestris*, 36% were found infested and the following species were recorded : *Ascaridia cylindrica, Thominx* sp., *Choanotaenia infundibulum* and *Leucochloridium macrostomum*. C.R.

(630r) In their experiments with *Cystocaulus nigrescens* in sheep, Davtyan & Panosyan came to the conclusion that sheep infested with this parasite are resistant to reinfestation. The immunity of sheep to hyperinfestation (if the primary infestation consisted of 3,000–5,000 larvae) retarded the process of migration to the lungs, and the larvae were encysted in the walls of the intestine where they died. With a weak primary infestation (250–500 larvae) migration of the larvae on reinfestation took place, but the time taken to reach maturity was lengthened and the period of larval production by the adult was reduced. Davtyan & Panosyan also state that where there is no immunity migration takes place through the small intestine, otherwise the larvae migrate via the large intestine. C.R.

(630s) Delamure gives diagnostic descriptions and figures of *Skrjabinalius cryptocephalus* Delamure, 1942, a lungworm of *Delphinus delphis*, and also of two lungworms of *Phocaena relicta*, namely *Halocercus* (*Posthalocercus*) *taurica* Delamure, 1942, and *H.* (*P.*) *ponticus* n.sp. The paper includes a key for the identification of the subgenera and species of *Halocercus*. [See also Helm. Abs., Vol. XI, No. 340c.] C.R.

(630t) Ershov examined the radices of the mesenteric arteries of 282 horses, in 279 of which aneurysms were present (98·8%). He discovered that the larvae in these aneurysms were fully grown only in May and June ; in the other months all larvae in the same aneurysm were of different sizes. The smallest larvae were found in August, September and October, while the greatest numbers of larvae in any one aneurysm were found in August, October, November and December. The highest number found was 468 in a horse which had died from suppurative inflammation of the root of the mesenteric artery. C.R.

(630u) Zakharov examined *Perca schrenki, Cyprinus carpio* and *Schizothorax argentatus* from Lake Balkhash, without finding plerocercoids of *Diphyllobothrium latum*. He also examined 2,014 humans in the same district, and found two cases of *D. latum*, but these were not local inhabitants. Post-mortem examinations of 34 dogs, mainly fed on fish, were also negative. C.R.

(630v) Ivanov examined 277 specimens of fish from the Volga delta, representing *Rutilus rutilus fluviatilis, R. r. caspicus, Scardinus erythrophthalmus, Aspius aspius, Tinca tinca, Abramis brama, A. sapa, A. ballerus, Pelecus cultratus, Carassius carassius* and *Cyprinus carpio*. The parasites found in each are listed with their rate of incidence. They include the following : *Diplozoon paradoxum, Gyrodactylus medius, Dactylogyrus nanus, D. sphyrna, Aspidogaster limacoides, Opisthorchis felineus* (metacercaria), *Metorchis albidus* (?) (metacercaria), *Asymphylodora imitans, A. expinosa, Sphaerostomum bramae, Neascus cuticola* (adolescent), *N. musculicola* (adolescent), *Caryophyllaeus laticeps, C. fennica, C. skrjabini, Ligula intestinalis* (larva), Heterocheilidae gen.?sp.? (larva), *Contracaecum* sp. (larva), *Philometra* sp., *P. sanguineum, P. ovatum, Eustrongylides* sp. and *Pomphorhynchus laevis*. C.R.

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w. KADENATSII, A. N., 1946.—[*Spirocerca vigisiana* n.sp., a new parasite of the fox *Vulpes corsac*.] pp. 126–129. [In Russian.]
x. KAMALOV, N. G., 1946.—[Epidemiology of ancylostomiasis.] pp. 130–134. [In Russian.]
y. KAROKHIN, V. I., 1946.—[Two new species of *Porrocaecum* in birds of prey in Siberia.] pp. 135–141. [In Russian.]
z. KEVORKOV, N. P., 1946.—[Influence of pregnancy and parturition on infestation with *Hymenolepis nana* and *H. fraterna*.] pp. 142–145. [In Russian.]
ba. KOPIRIN, A. V., 1946.—[Helminth fauna of domestic geese in the southern part of Omsk district.] pp. 146–148. [In Russian.]
bb. KROTOV, A. I., 1946.—[Dictyocauliasis of calves in Chuvash Republic.] pp. 149–150. [In Russian.]
bc. KRILOVA, Z. V., 1946.—[Experimental control of ascariasis in the personnel of a state farm.] pp. 151–153. [In Russian.]
bd. LEVASHOV, M. M., 1946.—[Observations on setariasis in horses used as serum-producers.] pp. 154–158. [In Russian.]
be. LEIKINA, E. S., 1946.—[Active immunization against helminthiasis.] pp. 159–168. [In Russian.]

(630w) In the stomach of *Vulpes corsac*, Kadenatsii found *Spirocerca vigisiana* n.sp., of which he gives a detailed description with figures of the anterior and posterior ends of the male. The paper includes a table differentiating this species from *S. arctica* and *S. lupi* found in fur-bearing animals. C.R.

(630x) Kamalov experimentally introduced the larvae of *Necator americanus* orally and percutaneously to piglets, but was unable to produce infestation. He came to the conclusion that *N. americanus* and *N. suillus* represent biologically different forms. C.R.

(630y) Karokhin gives descriptions and figures of *Porrocaecum flammei* n.sp. from the small intestine of *Asio flammeus*, and of *P. pseudodepressum* n.sp. from the stomach of *Aesalon columbarius*. He discusses the genus *Porrocaecum* and considers that it should be divided into two new subgenera, namely *Porrocaecum* n.subg. for species with interlabia present, and *Terranova* (Leiper & Atkinson, 1914) n.subg. for species with interlabia absent. C.R.

(630z) According to Kevorkov, pregnant women infested with *Hymenolepis nana* and pregnant mice and rats infested with *H. fraterna* do not, as recorded by Hunninen in 1935, throw off the infestation. The retarded egg production of *H. nana* in pregnant women and of *H. fraterna* in mice and rats, and the occasional loss of infestation, are explained by the unfavourable chemophysical condition of the intestine about the time of parturition. Oral administration of fresh placenta of rats and fresh and dried placenta of women has no influence on *H. fraterna* in rats and mice. C.R.

(630ba) According to Kopirin, 134 out of 145 geese (91·7%) in the Omsk district were infested as follows : *Amidostomum anseris* 82·8%, *Heterakis dispar* 39·2%, *Drepanidotaenia lanceolata* 21·3%, and *Hymenolepis setigera* 4·8%. C.R.

(630bb) Krotov found Dictyocaulus all the year round in cattle in the Chuvash Republic in 1943. Infestations occurred in cattle of all ages but mainly in those 5–18 months of age. C.R.

(630bc) Krilova reports that 38·5% of the population of the state farm "Ochakovo" were infested with ascarids. Among children 4–7 years of age and schoolchildren, 53% and 53·6% respectively were found to be infested. Treatment with santonin reduced the infestation in 68·8% of the cases and the egg-counts dropped on an average from 5,885 e.p.g. to 693 e.p.g. (i.e. by 88·2%). C.R.

(630bd) Levashov found that of 65 horses examined at the Molotov Institute, 39 (60%) were infested with *Setaria equina*. He collected preliminary data to show that *Tabanus tropicus* may be the vector of the microfilariae. C.R.

(630be) This is an essay on the immunity produced by nematodes, cestodes and trematodes, based on data collected from the literature. C.R.

bf. LYUBIMOV, M. P., 1946.—[*Ularofilaria papillocerca* n.g., n.sp., a new nematode of the subcutaneous tissues of *Tetraogallus altaica*.] pp. 169–170. [In Russian.]
bg. LAYMAN, E. M., 1946.—[Influence of the growth of the carp on the infectivity of its parasites.] pp. 171–177. [In Russian.]
bh. MATEVOSYAN, E. M., 1946.—[New cestodes of birds in Russia.] pp. 178–188. [In Russian.]
bi. MONOSZON, K. I., 1946.—[Aural and visual changes in trichinelliasis in man.] pp. 189–191. [In Russian.]
bj. MYASNIKOVA, E. A., 1946.—[The biology of *Oesophagostomum dentatum* (Rud., 1803).] pp. 192–198. [In Russian.]
bk. ORLOV, I. V., 1946.—[A new trematode in the intestine of *Castor fiber*, *Psilotrema castoris* n.sp.] pp. 199–201. [In Russian.]
bl. PETROV, A. M. & DUBNITSKI, A. A., 1946.—[The biology of *Strongyloides vulpis* and the epizoology of strongyloidiasis in the Arctic blue fox.] pp. 202–207. [In Russian.]
bm. PODYAPOLSKAYA, V. P., 1946.—[Experimental control of taeniasis saginata.] pp. 208–220. [In Russian.]

(630bf) Lyubimov describes and illustrates *Ularofilaria papillocerca* n.g., n.sp. from the subcutaneous tissues of *Tetraogallus altaica*. The absence of chitinous structures on the anterior end, the structure of the spicules, and the presence of a poorly marked anus relates this species to the genus *Aprocta*, but the presence in the male and female of a pair of terminal papillae and the viviparity of the female allow it to be made into a new genus *Ularofilaria*. C.R.

(630bg) Layman has found that the intensity of parasitic infestations in carp increased up to the third year of growth and then declined. C.R.

(630bh) In his studies on the helminths of birds from various localities in Russia, Matevosyan describes and illustrates *Hymenolepis skrjabini* n.sp. from *Nyroca ferina* ; *Dicranotaenia coronula* subsp. *micracantha* n.subsp. from domestic ducks, *Nyroca fuligula*, *N. marila*, *Anas penelope* and *A. platyrhynchos* ; *D. pseudocoronula* n.sp. from domestic ducks, *Nyroca fuligula* and *Melanitta fusca* ; *D. kutassi* n.sp. from *Nyroca marila* ; *D. andrejewoi* n.sp. from *Melanitta fusca* ; *Aploparaksis pseudofurcigera* n.sp. from *Anas platyrhynchos* ; *Diorchis* (*Diorchis*) *parvogenitalis* n.subg., n.sp. from *Nyroca ferina*, *N. fuligula* and *Anas crecca* ; and *Lateroporus skrjabini* n.sp. from *Nyroca marila*. The type of *Diorchis* (*Diorchis*) n.subg. is *D.* (*D.*) *skrjabini* Udintsev, 1937, and of *D.* (*Nudiorchis*) n.subg. is *D.* (*N.*) *bulbodes* Mayhew, 1929. C.R.

(630bi) Monoszon describes the diagnostic value of aural and visual changes in 100 cases of human trichinelliasis. C.R.

(630bj) Myasnikova, from a study of the life-history of *Oesophagostomum dentatum*, concluded that the eggs do not withstand desiccation, and that they hatch at 23°C. The infective larvae can migrate horizontally and vertically. After ingestion by pigs, the infective larvae penetrate into the mucous membrane of the intestine where they produce nodules in 48 hours. The larvae leave the nodules on the 23rd day, and mature in the lumen. Eggs may be found in the faeces 43 days after infestation. C.R.

(630bk) Orlov describes and illustrates *Psilotrema castoris* n.sp., from the small intestine of *Castor fiber*. This trematode was found in 7 out of 16 beavers. C.R.

(630bl) Petrov & Dubnitski found that in *Strongyloides vulpis* the life-cycle was direct during spring, autumn and winter and heterogenetic only in the summer. The optimum temperature for development was 25°–37°C. The larvae were sensitive to high and low temperatures. They were able to infect the host orally and through the skin. Experimentally infested dogs and foxes produced adults in 7–15 and 9–15 days respectively. Foxes and Artic blue foxes do not acquire immunity to reinfestation. C.R.

(630bm) By the intensive use of anthelmintics in human beings in the Kirovsk district, the incidence of taenioid worms was reduced by 2½ times in 2–3 years. This reduction also produced a decrease in the incidence of cysticerciasis in cattle. There are many tables and diagrams illustrating this paper. C.R.

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bn. POTEKHINA, L. F., 1946.—[Occurrence of *Ascaris columnaris* Leidy, 1856, in *Martes zibellina* in Russia.] pp. 221–222. [In Russian.]

bo. RUKHLYADEV, D. P., 1946.—[A new species of nematode, *Thominx marii* n.sp., from the oesophagus of the desman.] pp. 223–224. [In Russian.]

bp. RUKHLYADEVA, M. N., 1946.—[Nematodes of the genus *Capillaria* Zeder, 1800, in *Neomys fodiens*.] pp. 225–226. [In Russian.]

bq. SVESHNIKOVA, N. M., 1946.—[Diseases of *Phlox* spp. produced by the nematode *Anguillulina dipsaci* (Kühn, 1858).] pp. 227–232. [In Russian.]

br. SEMENOVA, N. E., 1946.—[Severe trichinelliasis in partisans in White Russia.] pp. 233–234. [In Russian.]

bs. SKARBILOVICH, T. S., 1946.—[Helminth fauna of bats in Russia.] pp. 235–244. [In Russian.]

bt. SMIRNOV, G. G., 1946.—[Data concerning the helminth fauna of cats in Central Asia.] pp. 245–246. [In Russian.]

(630bn) Potekhina places on record for the first time and describes *Ascaris columnaris* from the small intestine and stomach of two *Martes zibellina*. C.R.

(630bo) Rukhlyadev describes and illustrates *Thominx marii* n.sp., found in the mucous membrane of the oesophagus of desmans, of which 14 out of 28 examined were infested. It differs from *Capillaria erinacei* in that the spicular sheath is provided with spines. C.R.

(630bp) Rukhlyadeva notes the occurrence of *Capillaria capillaris* in the urinary bladder of 4 out of 17 *Neomys fodiens*, and describes *Capillaria petrowi* n.sp. and *C. kutori* n.sp. in 13 out of 17 animals. The trematodes, cestodes and nematodes found so far in *N. fodiens* are listed. C.R.

(630bq) Sveshnikova describes the pathological changes produced by *Anguillulina dipsaci* in many varieties of *Phlox paniculata*. In addition to the malformation of the stems and leaves described by many authors, she also found malformation of the inflorescence and the presence of the nematodes in the seed capsules. C.R.

(630br) Semenova describes clinical observations in 21 cases of trichinelliasis in an outbreak in White Russia. C.R.

(630bs) Skarbilovich found that 108 out of 272 bats belonging to seven different species were infested with worms, 99 (91·7%) with nematodes, 39 (36·1%) with trematodes and 63 (58·3%) with cestodes. Among the cestodes found, he describes and illustrates *Dicranotaenia crimensis* n.sp. from *Myotis myotis oxygnathus*, *D. syrdariensis* n.sp. from *Pipistrellus pipistrellus bactrianus*, and *Hymenolepsis skrjabinariana* n.sp. from *Eptesicus turcomanus*. A key is given for the identification of the Hymenolepididae found in bats. The author gives reasons for placing in the subfamily Capillariinae the three genera *Thominx* (syn. *Eucoleus*), *Capillaria* (syn. *Hepaticola*) and *Skrjabinocapillaria* n.g. In the latter he places *S. eubursata* n.sp. which is described and illustrated from the stomach of Chiroptera gen.?sp.? *Skrjabinocapillaria* n.g. is characterized as follows: oesophagus equal in length to half of the body; spicules absent in the male, spicular sheath without spines but with external corrugations, bursa-like widening at the end of the body; in the female, vulva situated posteriorly to oesophagus, with a protruding vulvar fold. He describes also *Litomosa filaria* from the body-cavity of *M. myotis oxygnathus* and cysts of *Agamospirura* from the wall of the intestine and stomach, mesentery, liver, lungs, kidneys and spleen of *Vespertilio murinus*, *Eptesicus turcomanus*, *Nyctalus noctula*, *Pipistrellus pipistrellus* and some unidentified Chiroptera. C.R.

(630bt) Smirnov examined 50 cats in Samarkand for parasites of the alimentary tract and found *Taenia taeniaeformis* in 68%, *Dipylidium caninum* in 54%, *Diplopylidium nölleri* in 14%, *Mesocestoides lineatus* in 2%, *Toxocara mystax* in 46%, *Toxascaris leonina* in 2% and *Uncinaria stenocephala* in 2%.

bu. SOBOLEV, A. A., 1946.—[Three new species of trematodes in wading birds.] pp. 247–251. [In Russian.]
bv. SPASSKI, A. A., 1946.—[A contribution to the knowledge of cestodes of birds in Russia.] pp. 252–261. [In Russian.]
bw. STATIROVA, N. A., 1946.—[The helminth fauna of *Plegadis falcinellus* in Kazakhstan.] pp. 262–263. [In Russian.]
bx. TUAEV, S. M., 1946.—[The incidence of *Ornithobilharzia turkestanica* (Skryabin, 1913) in zebu cattle in Azerbaijan Republic.] pp. 264–266. [In Russian.]
by. FEDYUSHIN, A. V., 1946.—[A new nematode, *Cyrnea lyruri* n.sp., parasitic in Tetraonidae.] pp. 267–273. [In Russian.]
bz. KHARICHKOVA, M. V., 1946.—[Biology of *Passalurus ambiguus* (Rud., 1819).] pp. 274–279. [In Russian.]
ca. CHERTKOVA, A. N., 1946.—[Occurrence of *Oxynema crassispiculum* (Sonsino, 1889) in foxes in Russia.] pp. 280–281. [In Russian.]
cb. SHIKHOBALOVA, N. P., GORODILOVA, L. I. & ISAICHEVA, A. I., 1946.—[Role of evacuees (from Western Russia) in local outbreaks of ascariasis and trichuriasis (in Samarkand).] pp. 282–288. [In Russian.]

(630bu) Sobolev describes *Plagiorchis morosovi* n.sp. from the small intestine of *Actitis hypoleucus* and *Tringa ochropus*. It differs from *P. fastuosus* mainly in having a comparatively short uterus and in showing a greater concentration of the vitelline glands at the posterior end. *P. ptschelkini* n.sp. is described from the small intestine of *T. ochropus*, and *Stomylotrema spasskii* n.sp. from the bursa Fabricii of *Capella gallinago*. Differential diagnoses and figures of all three trematodes are included. C.R.

(630bv) Spasski records the occurrence of 44 cestode species in birds in Russia. New host records are *Raillietina* (*R.*) *frontina* in *Jynx torquilla*, *Raillietina* sp. in representatives of the suborder Limicolae (*Vanellus vanellus*), *Hymenolepis* in the family Fringillidae (*H. semenovi* n.sp. in *Erythrina erythrina*), *H. crenata*(?) in *Dendrodromas leucotos*, *Hymenolepis* sp. in *Lanius minor*, *Aploparaksis* in the family Corvidae (*A. skrjabini* n.sp. in *Garrulus glandarius*), *Dilepis undula* in *Turdus ericetorum*, *D. sobolevi* n.sp. in *Luscinia luscinia*, *Anonchotaenia globata* in *Motacilla flava* and *A. bobica* in *Lullula arborea*. Other new names are *Raillietina* (*Paroniella*) *compacta polytestis* n.subsp. in *Oriolus oriolus*, *Anonchotaenia oschmarini* n.sp. in *Lanius minor*, *Biuterina clerci* nom.nov. for *B. meropina* in *Lanius collurio*, and *Paruterina iduncula* n.sp. in *Apus apus*. The new forms are described and illustrated. C.R.

(630bw) Statirova records the following parasites from *Plegadis falcinellus*: *Patagifer bilobus*, *Prosthogonimus putschkowsky*, *Dilepis urceus*, *Cyclorchida omalancristrota*, *Acuaria* (*Syncuaria*) *contorta*, *Tetrameres* sp., and *Agamospirura*. C.R.

(630bx) Tuaev gives tables showing the incidence and measurements of *Ornithobilharzia turkestanicum* in zebu cattle in Azerbaijan. C.R.

(630by) Fedyushin describes *Cyrnea lyruri* n.sp. from the duodenum and gizzard of *Lyrurus tetrix*, *Lagopus lagopus*, *Tetrastes bonasia* and *Tetrao urogallus*. A table shows the main characters of species of the genus *Cyrnea*. C.R.

(630bz) Kharichkova has found that if the eggs of *Passalurus ambiguus* are passed in the gastrula stage they develop to the infective stage in 7–8 days at the optimum temperature of 35°–38°C. There are two moults within the egg, the first in 24 hours and the second on the third day. The resistance of the egg to desiccation increases with the development of the egg. Adult worms in rabbits were obtained on the eleventh day after infestation. C.R.

(630ca) Chertkova notes the occurrence of *Oxynema crassispiculum* in foxes in Moscow Zoopark. C.R.

(630cb) Shikhobalova, Gorodilova & Isaicheva found that in children evacuated from White Russia and the Ukraine to Samarkand, ascarid infestations decreased from 25·8% to 4·9% while trichuriasis increased from 8·9% to 20·7%. Dissemination of Ascaris

630—Collected Papers on Helminthology (cont.)

cc. SCHULMAN, E. S., ABERMAN, E. S. & KALNING, A. A., 1946.—[Role of enterobiasis in the epidemiology of intestinal bacterial infections.] pp. 289–292. [In Russian.]
cd. SHUMAKOVICH, E. E., 1946.—[A new nematode, *Tetrameres grusi* n.sp. in *Grus grus*.] pp. 293–295. [In Russian.]
ce. SHCHERBOVICH, I. A., 1946.—[Trematodes of birds in the Far Eastern Region.] pp. 296–300. [In Russian.]

and Trichuris eggs produced an increase of these parasites in the local children from 2% and 1·8% to 4·6% and 5·9% respectively. Apart from these parasites the children also passed during this period eggs of *Hymenolepis nana*, *Taenia* sp., trichostrongyles and *Diphyllobothrium latum*. C.R.

(630cc) Schulman, Aberman & Kalning studied the relation between the incidence of *Enterobius vermicularis* infestation in children in orphanages and the soiling of hands with intestinal bacteria. Soiling of hands with faeces was 1·3 times higher in infested than in uninfested children. An examination of the washings from the children's hands revealed *Bacterium coli communis*, *Bact. coli communior*, *Bact. paracoli*, *Bact. faecalis* and *Bact. aerogenes*. C.R.

(630cd) Shumakovich describes and illustrates *Tetrameres grusi* n.sp. from the glandular stomach of *Grus grus*. The main specific character is an ornamentation of the cuticle at the caudal end of the male. C.R.

(630ce) Shcherbovich notes the incidence of trematodes in birds in the Far Eastern Region as follows: *Plagiorchis laricola* in *Phragmiticola* sp., *Tamerlania zarudnyi* in *Garrulus brandti*, *Hypoderaeum conoideum* in the wild duck, *Microparyphium problematicum* in *Corvus macrorhynchus*, *Echinostoma* sp. in *Ardea cinerea*, *Brachylaemus fuscatum* in *Turtur orientalis* and *Garrulus brandti*, *Leucochloridium macrostomum* in *Lanius bucephalus* and *Dendrocopus major*, *L. insigne* in *Turtur orientalis*, *Tocotrema lingua* in *Larus* spp., *Metagonimus yokogawai* and *Cyathocotyle orientalis* in *Larus ridibundus*, *Cotylurus pileatus* in *Sterna longipennes*, *Diplostomum spathaceum* in *Larus ridibundus*, *Strigea falconis* in *Falco subbuteo* and *Erschoviorchis lintoni* in *Larus ridibundus*. *Lyperosomum amurensis* n.sp. in the liver of *Lanius cristatus*, and *Pachytrema compositum* n.sp. in the gall-bladder of *Sterna longipennes* are described and figured. C.R.

631—CONFERENCIA SANITARIA PANAMERICANA (12th), Caracas, 12–24 January, 1947.

a. IGNACIO BALDÓ, J., GIL YÉPEZ, C., MAYER, M. & PIFANO C., F., 1946.—"Investigaciones concernientes a los aspectos pulmonar y cardiovascular de la schistosomiasis mansoni en una area endémica del país." Cuadernos Amarillos No. 9, 68 pp.
b. LUTTERMOSER, G. W., 1946.—"La campaña antibilharziana en Venezuela." Cuadernos Amarillos No. 12, 74 pp. [English summary pp. 66–67.]
c. MAYER, M. & PIFANO C., F., 1946.—"El diagnóstico de rutina de la schistosomiasis mansoni por la intradermorreacción y la reacción de Farley en la Campaña Sanitaria Antibilharziana. (Experiencias fundamentadas en 5.000 intradermorreaciones y 1.900 reacciones de desviación del complemento según Farley.)" Cuadernos Amarillos No. 18, 20 pp. [English summary pp. 16–17.]
d. BENAÍM PINTO, H., 1946.—"Aspectos cardio-vasculares de la anquilostomiasis, con especial referencia al problema de la miocarditis crónica." Cuadernos Amarillos No. 26, 452 pp.
e. GALLO, P. & VOGELSANG, E. G., 1946.—"Las zoonosis en Venezuela." Cuadernos Amarillos No. 27, 53 pp.
f. WANNONI L., L., 1946.—"Contribución al estudio del problema de saneamiento en Venezuela." Cuadernos Amarillos No. 28, 70 pp.

(631a) A number of children from the district of San Casimiro in Venezuela where schistosomiasis mansoni is common, were radiologically examined for pulmonary and cardiac changes. The results were inconclusive as tuberculous infections are also very common. R.T.L.

(631c) Antigen prepared from adult *Schistosoma mansoni* gave 95% positive reactions in intradermal tests in 171 known cases, and was always negative in 300 unexposed persons. In the Caracas area in clinically suspected cases or persons known to have been exposed, 33·6% of persons tested reacted positively. *Fasciola hepatica* antigen did not give exact results. Complement-fixation reactions with antigen prepared from the liver-pancreas of snails infected with *S. mansoni* cercariae, were positive in 92% of known cases, and in 40% of 1,298 suspected cases which had given a very weak or suspicious reaction to the intradermal test. E.M.S.

(631f) In an account of disease control measures in Venezuela, Wannoni L. includes work on ancylostomiasis and latrine construction. So far 69,889 persons had been treated with a mixture of 3 parts tetrachlorethylene and 2 parts oil of chenopodium ; the mixture was given to adults in gelatin capsules and to children mixed with castor oil. The index of parasitism before treatment was 65·94% for *Necator americanus* and 94·8% for all parasites. After treatment the indices were 22·22% and 71·25%, a reduction of 66·3% and 24·84% respectively. E.M.S.

632—CONGRESSO BRASILEIRO DE VETERINÁRIA (3rd), Pôrto Alegre, 1945.

*a. POU, M. C., FIELITZ, F. O. & RODRÍGUEZ GONZÁLEZ, M., 1946.—" Sobre un precedimiento para deshelmintizar perros. El empleo de enemas de peróxide de hidrógeno H_2O_2 (agua oxigenada) diluído." Anais, pp. 115–163.

*b. XAVIER, M., 1946.—" Notificação da dirofilariose em cães provenientes do Rio e Niterói (nota previa)." Anais, pp. 249–255.

*c. FREITAS, M. G., 1946.—" Sôbre um cestoide de pombo doméstico em Minas Gerais, Brasil (Cestoda–Davaineidae)." Anais, pp. 256–258. [English summary.]

*d. FREITAS, M. G., 1946.—" Notas sôbre a incidência de helmintos em suinos de Minas Gerais." Anais, pp. 259–262. [English summary.]

*e. SCALTRITTI, R. F. & PÉREZ FONTANA, V., 1946.—" Biologia de la hidatidosis." Anais, pp. 825–839.

633—COWAN, I. McT., [1946]—" Report of wildlife studies in the Rocky Mountain National Parks in 1945." Ottawa : National Parks Bureau, 34 pp.

These studies contain a brief reference to *Taenia hydatigena* in a wolf. As hydatid cysts are said to be common in the lungs of elk and deer and cysts of *Taenia krabbei* in the caribou, the wolf must serve as definitive host for these species also. A very old female mountain goat was found to be badly infected with the lungworm *Protostrongylus stilesi*. R.T.L.

634—DAWES, B., 1946.—" The Trematoda. With special reference to British and other European forms." Cambridge : University Press, xvi+644 pp., 52/6d.

635—*DE RIVAS, D., 1946.—" Filariasis." In : Cyclopedia of Medicine, Surgery and Specialities, edited by G. M. Piersol & E. L. Bortz, Vol. 6, pp. 307–314. Philadelphia : F. A. Davis Co.

636—*DESHAYES, E., 1946.—" Contribution à l'étude de la chimiothérapie antihelminthique. Traitement de l'oxyurose par la phénothiazine." Thèse, Paris.

637—DÉVÉ, F., 1946.—" L'échinococcose secondaire." Paris : Masson et Cie, xxviii+241 pp.

In this monograph Dévé gives a full account, based largely on his own extensive experience, of secondary hydatid. The development and pathology of the cysts is described. Secondary cysts may be found in many situations : the peritoneum, the greater omentum, the pelvis, the urinogenital system (from which a hernia may result), the caecum and appendix, or free in the body-cavity, as well as in the liver and pleura. Cysts from all these sites are described together with the resulting pathological changes. Many clinical studies are recorded with chapters on diagnosis and treatment. In an appendix Dévé discusses the question of alveolar hydatid which may result from metastasis of a fertile primary cyst. P.A.C.

638—DOLLFUS, R. P., 1946.—"Parasites (animaux et végétaux) des helminthes. Hyperparasites, ennemis et prédateurs des helminthes parasites et des helminthes libres. Essai de compilation méthodique." Paris: Paul Lechevalier, viii+482 pp.

639—DYKSTRA, R. R., 1946.—"Animal sanitation and disease control." Danville, Ill., revised edit., 568 pp.

640—FILIPJEV, I. N., 1946.—"Nématodes libres du Bassin Polaire." Report of the Drift-Ice Expedition of the First Polar Sea Circumnavigation in the Ice-breaker "G. Sedov", 1937–1940, 3, 158–177. [In Russian: also in French pp. 177–184.]

This paper, to all appearances the last scientific communication to be written by the late Dr. I. N. Filipjev, deals with the free-living marine nematodes collected in polar regions by the ice-breaker "G. Sedov" in its circumpolar trip 1937 to 1940. It contains descriptions in both Russian and French, as well as dimensions and drawings, of several forms new to science including two new genera, 25 new species and two new varieties. T.G.

641—*FONSECA, O., 1946.—"Parasitologia general." Madrid: Javier Morata, 144 pp., 25 pesetas.

642—GARNER, W. W., 1946.—"The production of tobacco." Philadelphia & Toronto: Blakiston Co., xiii+516 pp.

Heterodera marioni causes one of the most widely spread diseases of tobacco in the southern states of the U.S.A. and affects many crops including tobacco. The only effective remedy is soil sterilization which must be pushed to a greater depth than required for most soil-borne diseases. In the field, reliance must be placed on crop rotation with crops resistant to infection, although these often do not reduce the nematode population of the soil. Iron and Brabham varieties of cowpeas and Laredo soybeans, although resistant, are often not effective in reducing root-knot injury to tobacco. Cotton, although susceptible, may give better control than maize when preceding tobacco in the rotation. Among crops actually effective in reducing root-knot injury are peanuts, crotalaria, wheat, oats, rye, redtop and weeds. R.T.L.

643—GUILLAUME, A., 1946.—"Les animaux parasites de l'homme et des animaux domestiques. Moyens de destruction. Fascicule premier. Les vers parasites ou helminthes." Paris, 160 pp.

644—HUTYRA, F., MAREK, J. & MANNINGER, R., 1946.—"Special pathology and therapeutics of the diseases of domestic animals." London: Baillière, Tindall & Cox, 5th English edit., Vol. II, xi+704 pp.

645—MANTER, H. W., 1946.—"A laboratory manual in animal parasitology. With special reference to the animal parasites of man." Minneapolis: Burgess Publishing Co., revised edit., 113 pp., $1.50.

646—OPPERMANN, T., 1946.—"Lehrbuch der Krankheiten des Schafes." Hannover: M. & H. Schaper, 4th edit., 308 pp.

647—PAVLOVSKI, E. N., 1946.—[Manual of human parasitology. With an account of the vectors of transmissible diseases.] Moscow-Leningrad: Izdatelstvo Akademiya Nauk SSSR, Vol. I, 5th edit., 521 pp., 44 roubles. [In Russian.]

648—PESSÔA, S. B., 1946.—"Parasitologia médica." São Paulo: Editoria Renascença S.A., 858 pp.

649—*PICATOSTE, J., 1946.—"Quistes hidatidicos del aparato urinario y organos genitales masculinos." Madrid: Javier Morata, 160 pp., 25 pesetas.

650—REPORT. NAVAL MEDICAL RESEARCH INSTITUTE AND U.S. NAVAL HOSPITAL. Bethesda, Maryland.

a. KUNTZ, R. E. & STIREWALT, M. A., 1946.—"Effect of DDT on cercariae of *Schistosoma mansoni*." Research Project X-535, Report No. 6, 22 pp.
b. KUNTZ, R. E., 1946.—"Effect of light and temperature on shedding of *Schistosoma mansoni* cercariae." Research Project X-535, Report No. 7, 16 pp.
c. STIREWALT, M. A. & KUNTZ, R. E., 1946.—"A comparison of the effectiveness of several molluscicides against different species of snails." Project X-535, Report No. 8, 8 pp.

d. KUNTZ, R. E., STIREWALT, M. A. & BUCHHEIT, J. R., 1946.—"Method for testing ointments and fabrics to determine their effectiveness as barriers to schistosome cercariae." Project X-535, Report No. 9, 8 pp.

e. SMITH, R. E., STORMONT, R. T., BIANCO, A. A. & EVANS, R. L., 1946.—"Biological studies of antimony compounds containing radioactive isotopes: III. The blood-tissue exchange and excretion of antimony in humans given a single dose of tartar emetic." Research Project X-635, Report No. 1, 10 pp. [Appendix 4 pp.]

(650a) D.D.T. as powder or in oils and in xylene-Triton emulsions are not sufficiently reliable as lethal agents against *Schistosoma mansoni* cercariae to be of practical use. The emulsifying agent Triton alone incapacitates or immobilizes the cercariae; when mixed with xylene it is more toxic, and the addition of D.D.T. renders it still more lethal. Even when severely affected by these emulsions the cercariae, unless nearly dead, are potentially infective, for a small but dangerous percentage revive in fresh water. R.T.L.

(650b) More influence is exerted on the shedding of *Schistosoma mansoni* cercariae from *Australorbis glabratus* by abrupt changes in temperature than by abrupt changes in light intensity. Bright light and elevated temperature will force infected snails to liberate cercariae either three times daily or in moderate quantities daily for five to nine days. It has no marked effect on the mollusc or the longevity of the cercariae. R.T.L.

(650c) The choice of a molluscicide for field control depends on several factors besides cost and availability. The effectiveness of copper sulphate is drastically reduced in natural water with high organic content unless a concentration of 15 to 25 p.p.m. is maintained, and it is removed rapidly from hard water. Laboratory tests made on *Physa acuta*, *Australorbis glabratus* and *Oncomelania nosophora* indicated that concentrations of molluscicides lethal to *P. acuta* were less toxic to *A. glabratus* and *O. nosophora*. The effects of various dosages of Diesel oil, cresyl + Diesel oil solution (10% cresyl), cresyl + copper sulphate + Diesel oil solution (9% + 0·1% + 90% and water 0·9%), phemerol + Diesel oil emulsion (10% + 65% + water 25%), phemerol + copper sulphate + Diesel oil emulsion (10% + 20% + 70%), D.D.T. + xylene + Triton emulsion (5% + 15% + 5% + water 75%), on the adults of all three species and on 1–2-days-old eggs of *A. glabratus* are tabulated. It is concluded that whereas Diesel oil, cresyl + Diesel oil solution and phemerol + Diesel oil emulsion are lethal in practical field concentrations against *P. acuta* only, the addition of 6 to 8 p.p.m. of copper sulphate renders these agents lethal in practical field concentrations against the other two species. Immature snails and newly laid snail eggs are more susceptible than mature snails. In a military mosquito-snail control programme the use of copper sulphate in emulsion with phemerol and Diesel oil is considered to be practicable. R.T.L.

(650d) [This has also appeared in *Amer. J. trop. Med.*, 1947, **27** (6), 961–967. For abstract see Helm. Abs., Vol. XVI, No. 176h.]

651—REUNIÃO BIOLÓGICA PORTUGUESA (PRIMEIRA), Lisboa, 19 a 21 de Dezembro de 1945.

a. PINTO, M. R., MEIRA, M. T. V. DE & FONSECA, F., 1946.—"Estudo de alguns casos de infestação humana por helmintas do género *Trichoestrongylus*." Actas-Relatórios-Comunicações, pp. 277–286. [Discussion p. 286.]

b. FERREIRA, C., SIMÕES, F., COITO, A. DE M. F. & COITO, F. DE M. F., 1946.—"Acerca do grau de infestação helmíntica dos cães de Lisboa." Actas-Relatórios-Comunicações, pp. 289–294.

c. MEIRA, M. T. V. DE, GIRÃO, J. & COITO, A. F., 1946.—"Notas sobre um foco de ancilostomíase rural no nosso país." Actas-Relatórios-Comunicações, pp. 330–334. [Discussion p. 334.]

d. MEIRA, M. T. V. DE & COITO, A. DE M. F., 1946.—"Resultados de um inquérito sobre infestação intestinal por vermes de uma aldeia portuguesa." Actas-Relatórios-Comunicações, pp. 335–337.

(651a) *Trichostrongylus colubriformis* infection was found in Syrians, but not in other races, in Portuguese Guinea. It is confirmed that the larvae do not penetrate the skin. E.M.S.

(651b) In 30 dogs in Lisbon *Echinococcus granulosus* occurred in 4, *Dipylidium caninum* in 20, *Taenia serrata* in 12, *Taenia serialis*(?) in 1, *Toxocara canis* in 6, *Toxascaris leonina* in 6, *Ancylostoma caninum* in 1, *Uncinaria stenocephala* in 17, Paramphistomoidea in 1. R.T.L.

(651c) Hookworm eggs were found in the faeces of 31 out of 158 inhabitants of Eiras, a rural suburb of Coimbra. R.T.L.

(651d) An examination of the faeces of 151 persons in a rural area situated about 11 kilometres by road north of Figueira da Foz showed Ascaris, Trichuris and Hymenolepis eggs in 2, Ascaris, Trichuris and Enterobius in 3, Ascaris and Trichuris in 131, Ascaris eggs alone in 10 and Trichuris eggs alone in 5. R.T.L.

652—*RIEDEL, B. B., 1946.—"Protein supplements and hydrogen ion concentrations as factors in the resistance of chickens to ascarid infections." Dissertation, Kansas State University.

653—SKRYABIN, K. I., 1946.—[The development of Soviet helminthology.] Moscow & Leningrad : Izdatelstvo Akademiya Nauk, 211 pp. [In Russian.]

654—UNITED STATES DEPARTMENT OF AGRICULTURE, 1946.—"1946 progress report of golden nematode control." Bureau of Entomology & Plant Quarantine, iv+25 pp.

As a result of a survey carried out during 1946 of 25,362 acres in Nassau and Suffolk Counties, New York, the potato root eelworm (*Heterodera rostochiensis*) was found for the first time on 47 properties having a total of 1,595 acres, nine of the properties being outside the quarantine area then current. The survey took the form of intensive soil sampling on 10,006 acres and root examination on 15,356 acres. The total number of properties now known to be infested is 81, comprising 2,677 acres, all in Nassau County. 1,104 acres found to be infested before 1946 and 439 acres found infested for the first time in 1946 were fumigated with D-D at the rate of 450 lb. per acre, followed by rolling of the ground. The potatoes grown on land found to be infested were safely disposed of to distilleries, and precautions were taken to prevent the possible dissemination of the eelworm with them. Extensive tables are given of the areas surveyed and fumigated, and of weather records for the season. M.T.F.

655—UNITED STATES DEPARTMENT OF AGRICULTURE, 1946.—"Index-catalogue of medical and veterinary zoology. Part 7. Authors : H to Juzuki." Washington, D.C., pp. 1755–2271.

656—UNITED STATES DEPARTMENT OF AGRICULTURE, 1946.—"Index-catalogue of medical and veterinary zoology. Part 8. Authors : K to Kyzer." Washington, D.C., pp. 2273–2582.

657—UNITED STATES DEPARTMENT OF AGRICULTURE, 1946.—"Index-catalogue of medical and veterinary zoology. Part 9. Authors : L to Lyutkevich." Washington, D.C., pp. 2583–2966.

658—WAR OFFICE, 1946.—"Memoranda on medical diseases in tropical and sub-tropical areas." London : H.M. Stationery Office, 8th edit., 396 pp., 7/6d.

659—WORTHINGTON, E. B., 1946.—"Middle East Science. A survey of subjects other than agriculture. A report to the Director General. Middle East Supply Centre, August, 1945." London : H.M. Stationery Office, xiii+239 pp., 7/6d.

INDEXES

NOTE

In all indexes the reference is to the serial numbers and not to the pages. Numbers in **bold** type indicate abstracts, and numbers in Roman type refer to title-only entries.

In the Author Index there are no cross-references to show joint-authorship, but authors of joint papers are listed individually. Thus, a paper by " Brown, B., Jones, A. & Smith, J.' would have three separate entries, " Brown, B.", " Jones, A.", and " Smith, J.".

In the Index of Subjects, alphabetization is under the first word (e.g. " *Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed : papers on the genus as such ; papers on undefined species ; papers on new and defined species, e.g.

Capillaria
— spp.
— *aerophila*
— *amarali* n.sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word and also under the name of the parasite or disease.

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CORRIGENDA

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IV	475a	(Abstract)	Line 1, for " *Cerchorchis* " read " *Cercorchis* "
X	396b	(Title)	*For* " 135, 643-664." *read* " 135 (9/10), 643-644."
XII	399a	(Title)	*For* " 10 (112)," *read* " 5 (112),"
XIV	261a	(Title)	*For* " JOHNSTON, J. H." *read* " JOHNSTON, T. H."
XV	58c	(Title)	*For* " KINKAID, R. R." *read* " KINCAID, R. R."
	81c	(Abstract)	Line 12, *for* " and to white rats " *read* " and white rats "
	90a	(Abstract)	Line 5, *for* " emulsion " *read* " emulsin "
	94b	(Abstract)	Line 1, *for* " blue-nosed " *read* " bottle-nosed " Line 9, *for* " body cavity " *read* " body "
	112j	(Abstract)	Line 5, for " *Schistomophora* " read " *Schistosomophora* "

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